ECONOMIC AND BUDGET ANALYSES

2. ECONOMIC ASSUMPTIONS AND INTERACTIONS WITH THE BUDGET

This chapter presents the economic forecast on which the 2015 Budget projections are based.[1] When the President took office in January 2009, the economy was in the midst of an historic economic crisis. The first order of business for the new Administration was to arrest the rapid decline in economic activity that threatened to plunge the country into a second Great Depression. The President and the Congress took unprecedented actions to restore demand, stabilize financial markets, and put people back to work. These steps included passage of the American Recovery and Reinvestment Act (ARRA), signed by the President just 28 days after taking office. They also included the Financial Stability Plan, announced in February 2009, which encompassed wide-ranging measures to strengthen the banking system, increase consumer and business lending, and stem foreclosures and support the housing market. These and a host of other actions walked the economy back from the brink. The economy bottomed out in June 2009 and gradually started to recover in late 2009.[2] Further measures to aid the recovery were taken in December 2010, such as temporarily cutting payroll taxes and continuing extended unemployment insurance. At the start of 2013, the American Taxpayer Relief Act of 2012 (ATRA) prevented income tax increases on the vast majority of taxpayers and provided greater certainty for the years ahead.

Over the past 18 quarters, through the fourth quarter of 2013, real Gross Domestic Product (GDP) has grown at an average annual rate of 2.4 percent, and since February 2010, 8.5 million jobs have been added in the private sector. Meanwhile, the unemployment rate has fallen from its October 2009 peak of 10.0 percent to 6.6 percent in January.

The recovery is projected to gain momentum in 2014 and to strengthen further in 2015. However, even with healthy economic growth, unemployment is expected to be higher than is consistent with full employment for a few more years. The Administration is projecting unemployment to continue to decline until it stabilizes at 5.4 percent in 2018.This chapter contains several sections:

- The first section reviews recent economic performance.
- The second section discusses the Administration's economic projections.
- The third section compares the Administration's to other forecasts and to the Administration's projection in last year's Budget.
- The fourth section describes how changes in assumptions about key economic variables result in changes in receipts, outlays, and the deficit.
- The fifth section presents information on forecast errors for growth, inflation, and interest rates and how these forecast errors compare to those in forecasts made by the Congressional Budget Office (CBO) and the private-sector Blue Chip Consensus forecast.
- The sixth section presents alternatives to the current Administration forecast—based on both more optimistic and less optimistic assumptions with respect to real economic growth and unemployment—and describes the resulting effects on the deficit.
- The seventh section shows a probabilistic range of budget outcomes based on past errors in projecting the deficit.
- The last section discusses the relationship between structural and cyclical deficits, showing how much of the actual deficit is related to the economic cycle (e.g., the recent recession) and how much would persist even if the economy were at full employment.

Recent Economic Performance

The accumulated stresses from a contracting housing market and the resulting strains on financial markets brought the 2001-2007 expansion to an end in December 2007. In its early stages, the 2008-2009 recession was relatively mild, but financial conditions worsened sharply in the fall of 2008, and from that point forward the recession became much more severe. Before it ended, real GDP had fallen further and the downturn had lasted longer than any previous post-World War II recession. The recovery began in the third quarter of 2009, with real growth averaging 2.4 percent since that point, including 2.7 percent for the most recent four quarters. Looking ahead, the likely strength of the recovery is one of the key issues for the forecast.

Housing Markets Show Further Strength.—The housing market has shown clear signs of recovery, after its collapse in 2007 and 2008 which was a major cause of the financial crisis and recession. In 2006-2007, housing prices peaked, and from 2007 through 2008, housing prices fell sharply according to all available measures.[3] During the downturn, as house prices fell, investment in housing plummeted, reducing the annualized rate of

[1] In the Budget, economic performance is discussed in terms of calendar years. Budget figures are discussed in terms of fiscal years.

[2] The dating of U.S. business cycles is done by the National Bureau of Economic Research, a private institution that has supported economic research on business cycles and other topics for many decades.

[3] There are several measures of national housing prices. Two respected measures that attempt to correct for variations in housing quality are the S&P/Case-Shiller Home Price Index and the Federal Housing Finance Agency (FHFA) Purchase-Only House Price Index. The Case-Shiller index peaked in 2006, while the FHFA index peaked in 2007.

real GDP growth by an average of 1 percentage point per quarter. Housing prices started to rise again in 2012, with a cumulative gain of 17 percent over the last seven quarters, according to the Case-Shiller index. Residential investment began to increase steadily in the second quarter of 2011, and has risen at an annual rate of about 15 percent during 2012 and 2013.

In April 2009, housing starts fell to an annual rate of just 478,000 units, the lowest level ever recorded for this series, which dates from 1959. Housing starts rose modestly over the next two years, and increased to over 900,000 units over the 12 months through December 2013. Typically, about 1.65 million starts a year are needed to accommodate the needs of an expanding population with an increasing number of households, and to replace older units, indicating potential for a substantial housing rebound. Although a large overhang of vacant homes must be reduced before a robust housing recovery can become firmly established, there are indications that this is gradually happening with reduced vacancies and fewer foreclosures. The Administration forecast assumes a continued recovery in housing activity that adds to real GDP growth over the forecast horizon, especially over the next three years.

Deleveraging has Slowed Consumption, but it May be Near an End.—Between the first quarter of 2007 and the first quarter of 2009, the real net worth of American households declined by $15 trillion at 2009 prices (19 percent) – the equivalent of one year's GDP. A precipitous decline in the stock market, along with falling house prices over this period, were the main reasons for the drop in household wealth. Since then, real household wealth, including financial assets, has risen substantially and now exceeds its previous peak. Most of this is accounted for by the rise in equity prices. The turnaround in housing prices has raised residential wealth, although it remains below well below its previous peak level.[4]

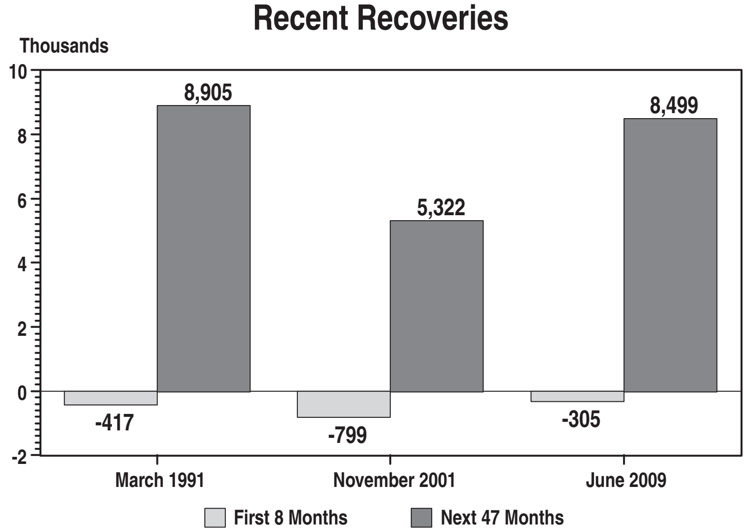
[4] Real wealth is computed by deflating household net worth from the Flow-of-Funds Accounts by the Chained Price Index for Personal Consumption Expenditures. Data are available through 2013:Q3.

Americans reacted to this massive loss of wealth by saving more. The personal saving rate had been declining since the 1980s, and it reached a low point of 2 percent in mid- 2005. It remained low, averaging only about 3 percent through the end of 2007, but since then, as wealth has declined, the saving rate has increased to an average of 5-1/2 percent between 2008 and 2012, declining somewhat to 4-1/2 percent last year. A sudden increase in the desire to save implies a corresponding reduction in consumer demand, and a fall-off in consumption had a negative effect on the economy during the recession of 2008 and early 2009. During that period, real consumer spending fell at an annual rate of almost 2 percent. Since then, real consumer spending has recovered, although it has increased only 1.9 percent over the past four quarters.

Rebound in Business Investment.—Business fixed investment fell sharply during the 2008-2009 contraction. It rose rapidly in 2010 through 2013, and real investment at the end of 2013 exceeded its pre-recession levels for the first time. The cost of capital is low and American corporations at the end of 2013 held substantial levels of cash reserves, which could provide funding for future investments as the economy continues to recover. The main constraint on business investment is poor sales expectations, which have been dampened by the slow pace of recovery. However, if consumption picks up, businesses are in a good position to expand investment. Nevertheless, the pace of future growth could prove to be uneven, as investment tends to be volatile.

Steady Progress in the Labor Market.—The unemployment rate peaked in 2009 at 10 percent. Private employment has grown for the past 47 straight months and the unemployment rate has declined to 6.6 percent. However, it remains above the level of unemployment consistent with nonaccelerating inflation, estimated at about 5.4 percent. Also, the rate of long-term unemployment (those out of work for more than 6 months) remains high. Unemployment has had devastating effects on American families, and the recovery will not be fully real for most Americans until the job market strengthens further. The

Chart 2-1. Private Job Gains and Losses During Recent Recoveries



positive job growth has far exceeded the job gains in the recovery following the 2001 recession, and is only slightly less than equivalent in comparison to the expansion in the 1990s (see Chart 2-1).

Domestic Energy Boom.—In the last five years, there has been a dramatic increase in domestic energy production. The United States is now one of the world's largest producers of oil and gas. Domestic production of crude oil rose above imports in October for the first time since 1995. This broad-based energy boom supports jobs directly in production and distribution, as well as indirectly by making the United States more attractive as a location for manufacturing by multi-national firms in energy intensive industries.

Fiscal Drag has Peaked.—Fiscal policy restraint has substantially slowed the expansion over the past two years, but fiscal drag will be a much smaller factor in 2014 as the reduction in Federal Government expenditures will be less than in 2013. In addition, tax increases took place in early 2013 which will not be repeated this year. And State and local level purchases has shifted to being a slightly positive factor for GDP growth. Therefore, private sector demand will not be offset by the Government as it was over the last several quarters, during which it reduced real GDP growth by over a percentage point. CBO

Table 2–1. ECONOMIC ASSUMPTIONS[1]

(Calendar years; dollar amounts in billions)

	Actual 2012	Projections											
		2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Gross Domestic Product (GDP):													
Levels, dollar amounts in billions:													
Current dollars	16,245	16,768	17,544	18,454	19,432	20,460	21,459	22,445	23,454	24,484	25,551	26,664	27,826
Real, chained (2009) dollars	15,471	15,736	16,218	16,763	17,323	17,884	18,389	18,855	19,315	19,766	20,221	20,686	21,162
Chained price index (2009 = 100), annual average	105.0	106.5	108.1	110.1	112.1	114.4	116.7	119.0	121.4	123.8	126.3	128.9	131.5
Percent change, fourth quarter over fourth quarter:													
Current dollars	3.8	3.6	5.0	5.2	5.3	5.3	4.7	4.6	4.5	4.4	4.4	4.4	4.4
Real, chained (2009) dollars	2.0	2.3	3.3	3.4	3.3	3.2	2.6	2.5	2.4	2.3	2.3	2.3	2.3
Chained price index (2009 = 100)	1.8	1.3	1.6	1.8	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Percent change, year over year:													
Current dollars	4.6	3.2	4.6	5.2	5.3	5.3	4.9	4.6	4.5	4.4	4.4	4.4	4.4
Real, chained (2009) dollars	2.8	1.7	3.1	3.4	3.3	3.2	2.8	2.5	2.4	2.3	2.3	2.3	2.3
Chained price index (2009 = 100)	1.7	1.4	1.6	1.8	1.9	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Incomes, billions of current dollars:													
Domestic Corporate Profits	1,591	1,693	1,844	2,036	2,175	2,204	2,127	2,025	1,981	1,944	1,896	1,852	1,802
Employee Compensation	8,612	8,837	9,189	9,630	10,137	10,695	11,274	11,846	12,427	13,026	13,638	14,290	14,965
Wages and salaries	6,927	7,116	7,402	7,754	8,173	8,648	9,124	9,592	10,059	10,536	11,028	11,552	12,066
Other taxable income[2]	3,725	3,948	4,125	4,336	4,615	4,974	5,359	5,709	6,012	6,302	6,582	6,854	7,134
Consumer Price Index (all urban):[3]													
Level (1982–84 = 100), annual average	229.6	232.9	236.6	241.3	246.5	252.0	257.7	263.5	269.5	275.6	281.8	288.2	294.7
Percent change, fourth quarter over fourth quarter	1.9	1.1	1.9	2.0	2.2	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3
Percent change, year over year	2.1	1.4	1.6	2.0	2.1	2.2	2.3	2.3	2.3	2.3	2.3	2.3	2.3
Unemployment rate, civilian, percent:													
Fourth quarter level	7.8	7.2	6.7	6.2	5.8	5.5	5.4	5.4	5.4	5.4	5.4	5.4	5.4
Annual average	8.1	7.5	6.9	6.4	6.0	5.6	5.4	5.4	5.4	5.4	5.4	5.4	5.4
Federal pay raises, January, percent:													
Military[4]	1.6	1.7	1.0	1.0	NA	NA	NA	NA	NA	NA	NA	NA	NA
Civilian[5]	0.0	0.0	1.0	1.0	NA	NA	NA	NA	NA	NA	NA	NA	NA
Interest rates, percent:													
91-day Treasury bills[6]	0.1	0.1	0.1	0.3	1.2	2.3	3.2	3.6	3.7	3.7	3.7	3.7	3.7
10-year Treasury notes	1.8	2.3	3.0	3.5	4.0	4.3	4.6	4.7	4.9	5.0	5.1	5.1	5.1

NA = Not Available

[1] Based on information available as of mid-November 2013.

[2] Rent, interest, dividend, and proprietors' income components of personal income.

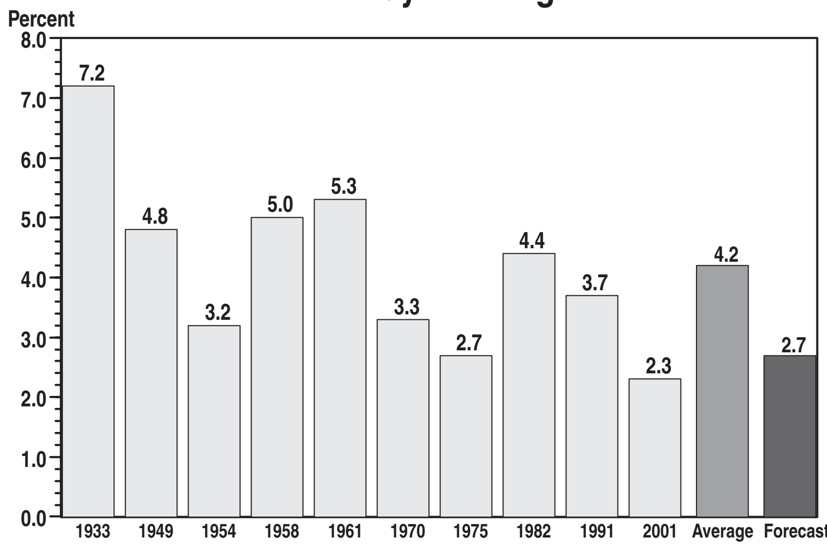
[3] Seasonally adjusted CPI for all urban consumers.

[4] Percentages apply to basic pay only; percentages to be proposed for years after 2014 have not yet been determined.

[5] Overall average increase, including locality pay adjustments. Percentages to be proposed for years after 2015 have not yet been determined.

[6] Average rate, secondary market (bank discount basis).

Chart 2-2. Seven-Year Average Growth Following Business Cycle Troughs



has estimated that changes in fiscal policy restrained output growth in 2013 by about 1-1/2 percentage points, and the drag this year should only be about 1/4 percentage point under current law.

Economic Projections

The economic projections underlying the 2015 Budget estimates are summarized in Table 2–1. The assumptions are based on information available as of mid-November 2013. This section discusses the Administration's projections, and the next section compares these projections with those of the Federal Reserve's Open Market Committee (FOMC), the CBO, and the Blue Chip Consensus of private forecasters.

Real GDP.—Real GDP grew 2.7 percent during the four quarters of 2013. The Administration projects the economic recovery that began in mid-2009 will continue with real GDP growing at an average annual rate of 3.3 percent over the next four years. This economic forecast, as always, is based on the assumption that the Administration's budget proposals are enacted in full, including a proposal for investment in infrastructure, research, and other priorities to boost the economy and help lay a foundation for long-term growth. The Budget also assumes that the deep cuts in defense and nondefense discretionary spending which began with the across-the-board sequester in March 2013, and which were partially alleviated by the Congress in the recent bipartisan budget agreement, are replaced by the closure of tax loopholes and mandatory spending reductions. Real GDP growth is projected to ease to 2.5 percent by 2019, and to grow at a steady 2.3 percent rate for the final years of the forecast. The slight drop off in the last few years is due to demographic factors that lower the labor force participation rate as the baby boom generation retires.

As shown in Chart 2-2, the Administration's projections for real GDP growth over the first seven years of the recovery (history plus projected) reflect the depth and severity of the preceding recession. Recent recoveries have been somewhat weaker than average, but the last two expansions were preceded by mild recessions with relatively little pent-up demand when conditions improved. Because of the depth of the most recent recession, there was much more room for a rebound in spending and production than was true either in 1991 or 2001. On the other hand, lingering effects from the credit crisis and other special factors limited the pace of the recovery in the first stages of the expansion, while less favorable demographics also slowed growth relative to previous recoveries.

The U.S. economy has substantial room for growth, although there are factors that could continue to limit that growth in the years ahead. On the positive side, the unemployment rate has fallen since the recession trough and further progress is expected in 2014-15, particularly if the President's Budget proposals are adopted. As noted previously, the sharp fiscal restraint that was implemented to bring down the deficit has peaked, with much smaller restraint projected over the next couple of years. Monetary policy likely will continue to support growth as the Federal Reserve Open Market Committee's January directive states that "…it likely will be appropriate to maintain the current target range for the federal funds rate well past the time that the unemployment rate declines below 6-1/2 percent, especially if projected inflation continues to run below the Committee's 2 percent longer-run goal." However, financial markets here and in Europe have been troubled by weak economic growth, the sustainability of fiscal policy in some European countries, and sovereign debt concerns. The drag from a slowdown in European or emerging markets could hamper the growth of the U.S. economy.

Long-Term Growth.—The Administration's forecast does not attempt to project cyclical developments beyond the next few years. The long-run projection for real economic growth and unemployment assumes that they will maintain trend values in the years following the return to full employment. Real GDP, reflecting the slower growth in productivity outside the nonfarm business sector, grows at a rate of 2.3 percent in the final years of the projection. That is markedly slower than the average growth rate of real GDP since 1947 of 3.2 percent per year. In the 21st Century, real GDP growth in the United States is likely to be permanently slower than it was in earlier eras because of a slowdown in labor force growth initially due to the retirement of the post-World War II baby boom generation, and later due to a decline in the growth of the working-age population. These projections do not include the effects of immigration reform, which has the potential to attenuate this slowdown in labor force growth.

Unemployment.—In January 2014, the overall unemployment rate was 6.6 percent. In line with the increased growth in the economy projected after 2013, the unemployment rate is expected to decline to 5.4 percent by 2018 and to continue at that level during the period of trend growth during the last few years of the forecast.

Inflation.—The Consumer Price Index for all urban consumers (CPI-U) rose by 1.5 percent for the 12 months ending in December 2013. Over the previous 12 months it had risen by 1.8 percent. The decline in inflation in 2013 was due mainly to lower energy price inflation. The "core" CPI, excluding both food and energy, was up 1.7 percent in 2013, down slightly from the 1.9 percent during 2012.

Weak demand continues to hold down prices for many goods and services, and continued high unemployment together with other measures of economic slack are expected to result in a relatively low inflation rate. As the economy recovers and the unemployment rate declines, the rate of inflation should remain near the Federal Reserve's target of around 2 percent per year. With the recovery path assumed in the Administration forecast, the risk of outright deflation appears minimal. The Administration projects that the rate of change in the CPI-U will average 2.3 percent and that the GDP price index will increase at a 2.0 percent annual rate in the long run.

Interest Rates.—Interest rates on Treasury securities fell sharply in late 2008, as both short-term and long-term rates declined to their lowest levels in decades. Since then, Treasury rates have fluctuated, but they have not returned to the levels before the financial crisis. The Federal Reserve's policy of purchasing long-term Treasury securities has helped to hold down long-term rates, but market expectations changed somewhat last summer when speculation grew that the FOMC would start to reduce its quantitative easing, which happened a few months later in December. During 2013, the 10-year rate increased sharply by over 1 percentage point to 2.8 percent in the fourth quarter, although short-term rates stayed near zero. In the Administration projections, interest rates are expected to rise, but only gradually as financial concerns are alleviated and the economy recovers from recession. The 91-day Treasury bill rate is projected to remain near zero into 2015 consistent with the Federal Reserve's announced intentions, and then to rise to 3.7 percent by 2020. The 10-year rate continues to rise moderately in 2014 and reaches 5.1 percent by 2021. After adjusting for inflation, the projected real interest rates in the last few years of the projection are close to their historical averages.

Income Shares.—The share of labor compensation was extremely low by historical standards in 2013 at 52.7 percent of GDP. It is expected to fall to 52.2 percent of GDP by 2015. As the economy grows faster in the middle years of the forecast period, and as employment increases as a result, compensation is projected to rise, reaching 53.8 percent of GDP in 2024. In the expansion that ended in 2007, hourly labor compensation tended to lag behind the growth in productivity, and that has also been true for the surge in productivity growth in 2009-2010. The share of wages and salaries is expected to rise from 42.4 percent of GDP in 2013 to 43.4 percent in 2024. The share of domestic corporate profits is expected to rise from 10.1 percent of GDP in 2013 to 11.2 percent in in 2016, after which it will decline to 6.5 percent in 2024.

Changes in Economic Assumptions from Last Year's Budget.—The 2015 Budget forecast reflects economic developments over the past year, but some of the forecast values are similar to those of the 2014 Budget, especially in the long run (see Table 2–2). The previous Budget anticipated more rapid growth in 2013-2017 than the current Budget, and assumed a slightly higher rate of potential GDP growth in the long run. The projection for the long-term unemployment rate has remained unchanged, but the forecast starts from a lower level, reflecting the sharper-than-expected decline in unemployment in 2013. Projected interest rates are higher in the medium term, reflecting the actual rise in long-term interest rates during 2013, but are little changed in the long term. As in last year's projections, inflation is also projected to return to its long-run average consistent with Federal Reserve policy, now estimated at 0.1 percentage point higher than last year at 2.3 percent for the CPI-U and 2.0 percent for the GDP price index.

Comparison with Other Forecasts

Table 2–3 compares the economic assumptions for the 2014 Budget with projections by CBO, the Blue Chip Consensus—an average of about 50 private-sector economic forecasts—and, for some variables, the Federal Reserve Open Market Committee. These other forecasts differ from the Administration's projections, but the differences are relatively small compared with the margin of error in all economic forecasts. Like the Administration's forecast, the other forecasts project that real GDP will continue to grow as the economy returns to a normal level of unemployment. The forecasts also agree that inflation will be low while outright deflation is avoided, and that interest rates will eventually rise to more normal levels.

There are some conceptual differences between the Administration forecast and the other economic forecasts. The Administration forecast assumes that the President's Budget proposals will be enacted, providing important support for economic growth. The 50 or so private forecasters in the Blue Chip Consensus make differing policy assumptions, but it is safe to assume that they do not

Table 2–2. COMPARISON OF ECONOMIC ASSUMPTIONS IN THE 2014 AND 2015 BUDGETS
(Calendar years; dollar amounts in billions)

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Nominal GDP:											
2014 Budget Assumptions[1]	16,955	17,836	18,815	19,861	20,953	22,017	23,023	24,029	25,061	26,133	27,249
2015 Budget Assumptions	16,768	17,544	18,454	19,432	20,460	21,459	22,445	23,454	24,484	25,551	26,664
Real GDP (2009 dollars):											
2014 Budget Assumptions[1]	15,836	16,349	16,926	17,535	18,155	18,722	19,213	19,680	20,146	20,615	21,096
2015 Budget Assumptions	15,736	16,218	16,763	17,323	17,884	18,389	18,855	19,315	19,766	20,221	20,686
Real GDP (percent change):[2]											
2014 Budget Assumptions	2.3	3.2	3.5	3.6	3.5	3.1	2.6	2.4	2.4	2.3	2.3
2015 Budget Assumptions	1.7	3.1	3.4	3.3	3.2	2.8	2.5	2.4	2.3	2.3	2.3
GDP Price Index (percent change):[2]											
2014 Budget Assumptions	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9
2015 Budget Assumptions	1.4	1.6	1.8	1.9	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Consumer Price Index (all-urban; percent change):[2]											
2014 Budget Assumptions	2.1	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2
2015 Budget Assumptions	1.4	1.6	2.0	2.1	2.2	2.3	2.3	2.3	2.3	2.3	2.3
Civilian Unemployment Rate (percent):[3]											
2014 Budget Assumptions	7.7	7.2	6.7	6.2	5.7	5.5	5.4	5.4	5.4	5.4	5.4
2015 Budget Assumptions	7.5	6.9	6.4	6.0	5.6	5.4	5.4	5.4	5.4	5.4	5.4
91-day Treasury bill rate (percent):[3]											
2014 Budget Assumptions	0.1	0.2	0.4	1.3	2.3	3.2	3.6	3.7	3.7	3.7	3.7
2015 Budget Assumptions	0.1	0.1	0.3	1.2	2.3	3.2	3.6	3.7	3.7	3.7	3.7
10-year Treasury note rate (percent):[3]											
2014 Budget Assumptions	2.0	2.6	3.1	3.7	4.1	4.4	4.6	4.8	5.0	5.0	5.0
2015 Budget Assumptions	2.3	3.0	3.5	4.0	4.3	4.6	4.7	4.9	5.0	5.1	5.1

[1] Adjusted for July 2013 NIPA revisions.
[2] Calendar year over calendar year.
[3] Calendar year average.

generally assume full enactment of the Administration's budget proposals. CBO is required in making its projections to assume that current law will continue, resulting in scheduled reductions in discretionary spending relative to the original BCA caps

The Administration projections were completed in mid-November. The nearly four-month lag between that date and the Budget release is due in part because the budget process requires lead time to complete the estimates for agency programs that are incorporated in the Budget. In addition, the appropriation bills for 2014 were not completed until mid-January, stretching out the time needed to complete the 2015 Budget. Forecasts made at different dates will differ if economic news between the two dates alters the economic outlook. The Blue Chip Consensus for 2014-2024 in this table was the latest available, from early February for projections through 2015 and from October for long-term projections. The CBO forecast is from its February 2014 report on the budget outlook, but the economic assumptions were locked in early December. The FOMC members' central tendencies of their forecasts are from December 2013.

Real GDP Growth.—In 2014-16, the Administration expects more growth than Blue Chip and CBO, partly because the forecast assumes that all of the Budget proposals will be enacted. Other forecasters make different assumptions. In 2014, the Administration expects growth to increase, while most other forecasters also look for an increase but to a lesser degree.

The Administration projects that still high levels of unemployment imply a few years of higher-than-normal growth as employment increases and real GDP makes up the lost ground. In the Blue Chip projections, real GDP growth exceeds its long-run average only briefly in the 11-year forecast period. CBO anticipates a stronger recovery than Blue Chip between 2015 and 2017—close to the Administration's projection—but projects a sharper decline in growth in the later years than the Administration, Blue Chip, or the FOMC. CBO assumes slower growth in productivity and potential GDP in the long-term and also assumes that actual GDP will remain below potential after the economy has completed its cyclical recovery. The high end of the FOMC's projections are about the same as the Administration's.

All economic forecasts are subject to error, and looking back, past forecast errors are generally much larger than the forecast differences discussed above. As discussed in a section later in this chapter, past forecast errors among the Administration, CBO, and the Blue Chip have been roughly similar.

Table 2–3. COMPARISON OF ECONOMIC ASSUMPTIONS
(Calendar years)

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Nominal GDP:												
2015 Budget	16,768	17,544	18,454	19,432	20,460	21,459	22,445	23,454	24,484	25,551	26,664	27,826
CBO	16,769	17,472	18,357	19,329	20,281	21,180	22,097	23,035	23,998	25,000	26,036	27,095
Blue Chip	16,803	17,565	18,429	19,348	20,295	21,268	22,265	23,285	24,341	25,443	26,594	27,804
Real GDP (year-over-year):												
2015 Budget	1.7	3.1	3.4	3.3	3.2	2.8	2.5	2.4	2.3	2.3	2.3	2.3
CBO	1.7	2.7	3.3	3.4	3.0	2.4	2.3	2.2	2.2	2.1	2.1	2.0
Blue Chip	1.9	2.9	3.0	2.9	2.7	2.6	2.5	2.4	2.4	2.4	2.4	2.4
Real GDP (fourth-quarter-over-fourth-quarter):												
2015 Budget	2.3	3.3	3.4	3.3	3.2	2.6	2.5	2.4	2.3	2.3	2.3	2.3
CBO	2.1	3.1	3.4	3.4	2.7	2.4	2.3	2.2	2.2	2.1	2.1	2.0
Blue Chip	2.7	2.7	3.0	2.8	2.7	2.6	2.5	2.4	2.4	2.4	2.4	2.4
Federal Reserve Central Tendency	2.2 –2.3	2.8 - 3.2	3.0 - 3.4	2.5 - 3.2								
GDP Price Index:[1]												
2015 Budget	1.4	1.6	1.8	1.9	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
CBO	1.4	1.5	1.7	1.8	1.9	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Blue Chip	1.4	1.6	1.9	2.0	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1
Consumer Price Index (CPI-U):[1]												
2015 Budget	1.4	1.6	2.0	2.1	2.2	2.3	2.3	2.3	2.3	2.3	2.3	2.3
CBO	1.5	1.7	2.0	2.1	2.2	2.4	2.4	2.4	2.4	2.4	2.4	2.4
Blue Chip	1.5	1.6	2.0	2.2	2.4	2.4	2.4	2.3	2.3	2.3	2.3	2.3
Unemployment Rate:[2]												
2015 Budget	7.5	6.9	6.4	6.0	5.6	5.4	5.4	5.4	5.4	5.4	5.4	5.4
CBO	7.4	6.8	6.5	6.1	5.9	5.8	5.7	5.7	5.6	5.6	5.5	5.5
Blue Chip	7.4	6.6	6.1	6.1	5.8	5.6	5.6	5.6	5.6	5.6	5.6	5.6
Federal Reserve Central Tendency[3]	7.0 - 7.1	6.3 - 6.6	5.8 - 6.1	5.3 - 5.8								
Interest Rates:[2]												
91-Day Treasury Bills (discount basis):												
2015 Budget	0.1	0.1	0.3	1.2	2.3	3.2	3.6	3.7	3.7	3.7	3.7	3.7
CBO	0.1	0.2	0.4	1.8	3.3	3.7	3.7	3.7	3.7	3.7	3.7	3.7
Blue Chip	0.1	0.1	0.5	2.0	3.0	3.4	3.5	3.6	3.6	3.6	3.6	3.6
10-Year Treasury Notes:												
2015 Budget	2.3	3.0	3.5	4.0	4.3	4.6	4.7	4.9	5.0	5.1	5.1	5.1
CBO	2.4	3.1	3.7	4.3	4.8	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Blue Chip	2.4	3.1	3.7	4.2	4.6	4.7	4.8	4.7	4.7	4.7	4.7	4.7

NA = Not Available
Sources:Administration;CBO, The Budget and Economic Outlook: Fiscal Years 2014 to 2024
October 2013 and February 2014 Blue Chip Economic Indicators, Aspen Publishers, Inc.;
Federal Reserve Open Market Committee, December 18, 2013.
[1] Year-over-year percent change.
[2] Annual averages, percent.
[3] Average of 4th quarter values.

Unemployment, Inflation, and Interest Rates.— The Administration forecasts unemployment falling steadily over the next few years to a level of 5.4 percent. In the long run, the FOMC, Blue Chip and CBO also show similar declines in the unemployment to about 5-1/2 percent which is about the average unemployment rate that prevailed in the 1990s and 2000s.

The Administration, CBO, and the Blue Chip Consensus anticipate a subdued rate of inflation over the next two years. In the medium term, inflation is projected to return to a rate of around two percent per year, which is consistent with the Federal Reserve's long-run policy goal. All forecasts have interest rates increasing substantially in the long run to similar levels.

Sensitivity of the Budget to Economic Assumptions

Both receipts and outlays are affected by changes in economic conditions. Budget receipts vary with individual and corporate incomes, which respond to both real economic growth and inflation. At the same time, outlays for many Federal programs are directly linked to develop-

Table 2–4. SENSITIVITY OF THE BUDGET TO ECONOMIC ASSUMPTIONS
(Fiscal years; in billions of dollars)

Budget effect	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	Total of Effects, 2014–2024
Real Growth and Employment												
Budgetary effects of 1 percent lower real GDP growth:												
(1) For calendar year 2014 only, with real GDP recovery in 2015–16:												
Receipts	–17.3	–27.7	–12.9	–1.5	0.0	0.0	–0.0	–0.0	–0.1	–0.1	–0.2	–59.8
Outlays	4.5	10.8	5.7	1.8	2.4	3.0	3.2	3.3	3.4	3.5	3.7	45.2
Increase in deficit (+)	21.8	38.5	18.6	3.3	2.3	3.0	3.2	3.3	3.5	3.6	3.8	104.9
(2) For calendar year 2014 only, with no subsequent recovery:												
Receipts	–17.3	–36.9	–42.5	–45.3	–47.8	–50.5	–53.4	–56.5	–59.7	–63.1	–66.6	–539.6
Outlays	4.5	13.2	15.6	19.2	24.0	28.9	33.0	37.1	41.4	46.0	50.8	313.7
Increase in deficit (+)	21.8	50.1	58.1	64.5	71.8	79.4	86.4	93.5	101.2	109.1	117.4	853.3
(3) Sustained during 2014 - 2024, with no change in unemployment:												
Receipts	–17.5	–56.8	–106.0	–161.4	–221.5	–287.2	–358.6	–436.2	–520.3	–611.4	–709.2	–3,486.1
Outlays	–0.2	–0.5	0.1	3.5	11.1	22.1	34.4	48.5	65.4	85.3	109.0	378.8
Increase in deficit (+)	17.3	56.3	106.2	164.9	232.7	309.3	393.1	484.7	585.7	696.7	818.2	3,864.9
Inflation and Interest Rates												
Budgetary effects of 1 percentage point higher rate of:												
(4) Inflation and interest rates during calendar year 2014 only:												
Receipts	23.6	50.1	49.8	47.7	50.7	53.7	56.9	60.2	63.4	66.8	70.1	593.0
Outlays	22.9	41.6	36.3	36.6	35.4	35.6	33.8	33.7	32.8	32.7	31.7	373.1
Decrease in deficit (–)	–0.7	–8.5	–13.6	–11.1	–15.3	–18.1	–23.0	–26.4	–30.6	–34.1	–38.4	–219.9
(5) Inflation and interest rates, sustained during 2014 - 2024:												
Receipts	23.6	77.4	137.0	196.2	258.7	329.8	414.0	504.9	600.7	704.3	815.7	4,062.4
Outlays	20.8	70.3	114.7	157.8	197.3	240.7	283.2	326.4	373.3	413.8	450.4	2,648.8
Decrease in deficit (–)	–2.8	–7.0	–22.3	–38.3	–61.4	–89.1	–130.8	–178.5	–227.4	–290.5	–365.4	–1,413.6
(6) Interest rates only, sustained during 2014 - 2024:												
Receipts	6.1	20.7	32.2	36.8	39.0	43.1	52.7	61.0	66.4	70.9	74.4	503.4
Outlays	11.2	41.2	63.3	83.6	101.2	118.8	134.7	149.6	162.6	175.2	186.4	1,227.9
Increase in deficit (+)	5.1	20.5	31.1	46.7	62.2	75.8	82.0	88.6	96.2	104.3	111.9	724.5
(7) Inflation only, sustained during 2014 - 2024:												
Receipts	17.4	56.4	104.3	158.5	218.5	285.2	359.4	441.6	531.5	630.1	737.5	3,540.3
Outlays	9.6	29.4	52.2	75.8	98.8	126.5	155.5	186.6	224.1	256.3	287.2	1,502.1
Decrease in deficit (–)	–7.8	–27.0	–52.1	–82.6	–119.7	–158.7	–203.9	–254.9	–307.4	–373.7	–450.3	–2,038.2
Interest Cost of Higher Federal Borrowing												
(8) Outlay effect of $100 billion increase in borrowing in 2014	0.1	0.2	0.9	2.1	3.2	4.0	4.4	4.6	4.8	5.0	5.2	34.6

[1] The unemployment rate is assumed to be 0.5 percentage point higher per 1.0 percent shortfall in the level of real GDP.

ments in the economy. For example, most retirement and other social insurance benefit payments are tied by law to consumer price indices. Medicare and Medicaid outlays are affected directly by the price of medical services. Interest on the debt is linked to market interest rates and the size of the budget surplus or deficit, both of which in turn are influenced by economic conditions. Outlays for certain benefits such as unemployment compensation and the Supplemental Nutrition Assistance Program vary with the unemployment rate.

This sensitivity complicates budget planning because differences in economic assumptions lead to changes in the budget projections. Economic forecasting inherently entails uncertainty. It is therefore useful to examine the implications of changes in key economic assumptions. Many of the budgetary effects of such changes are fairly predictable, and a set of general principles or "rules of thumb" embodying these relationships can aid in estimating how changes in the economic assumptions would alter outlays, receipts, and the surplus or deficit. These rules of thumb should be understood as suggesting orders of magnitude; they do not account for potential secondary effects.

Table 2–5. FORECAST ERRORS, JANUARY 1982-PRESENT

REAL GDP ERRORS			
2-Year Average Annual Real GDP Growth	Admin.	CBO	Blue Chip
Mean Error	0.0	-0.2	-0.2
Mean Absolute Error	1.1	1.1	1.1
Root Mean Square Error	1.5	1.4	1.5
6-Year Average Annual Real GDP Growth			
Mean Error	0.2	-0.1	-0.1
Mean Absolute Error	0.9	0.9	0.9
Root Mean Square Error	1.1	1.2	1.1
INFLATION ERRORS			
2-Year Average Annual Change in the GDP Price Index	Admin.	CBO	Blue Chip
Mean Error	0.3	0.2	0.4
Mean Absolute Error	0.7	0.7	0.7
Root Mean Square Error	0.8	0.9	0.9
6-Year Average Annual Change in the GDP Price Index			
Mean Error	0.4	0.5	0.7
Mean Absolute Error	0.6	0.8	0.9
Root Mean Square Error	0.8	0.9	1.1
INTEREST RATE ERRORS			
2-Year Average 91-Day Treasury Bill Rate	Admin.	CBO	Blue Chip
Mean Error	0.3	0.4	0.6
Mean Absolute Error	1.0	0.9	1.0
Root Mean Square Error	1.2	1.1	1.3
6-Year Average 91-Day Treasury Bill Rate			
Mean Error	0.5	1.0	1.2
Mean Absolute Error	1.1	1.2	1.3
Root Mean Square Error	1.3	1.5	1.5

The rules of thumb show how the changes in economic variables affect Administration estimates for receipts and outlays, holding other factors constant. They are not a prediction of how receipts or outlays would actually turn out if the economic changes actually materialized. The rules of thumb are based on a fixed budget policy which does not account for how policymakers might change taxes and spending should the economic outlook change substantially. For example, unexpected downturns in real economic growth, and attendant job losses, usually give rise to legislative actions to stimulate the economy with additional countercyclical policies. Also, the rules of thumb do not reflect certain "technical" changes that often accompany the economic changes. For example, changes in capital gains realizations often accompany changes in the economic outlook. On the spending side of the budget, the rules of thumb do not capture changes in deposit insurance outlays, even though bank failures are generally associated with weak economic growth and rising unemployment.

Economic variables that affect the budget do not always change independently of one another. Output and employment tend to move together in the short run: a high rate of real GDP growth is generally associated with a declining rate of unemployment, while slow or negative growth is usually accompanied by rising unemployment, a relationship known as Okun's Law. In the long run, however, the rate of growth of real GDP reflects mainly the rates of growth of productivity and the labor force, and is not associated with changes in the average rate of unemployment. Expected inflation and interest rates are also closely interrelated: a higher expected rate of inflation increases nominal interest rates, while lower expected inflation reduces them.

Changes in real GDP growth or inflation have a much greater cumulative effect on the budget if they are sustained for several years than if they last for only one year. However, even temporary changes can have lasting effects if they permanently raise or lower the level of the tax base or the level of Government spending. Moreover, temporary economic changes that affect the deficit or surplus change the level of the debt, affecting future interest payments. Highlights of the budgetary effects of these rules of thumb are shown in Table 2-4.

For real growth and employment:

- The first block shows the effect of a temporary reduction in real GDP growth by one percentage point sustained for one year, followed by a recovery of GDP to the base-case level (the Budget assumptions) over the ensuing two years. In this case, the unemployment rate is assumed to rise by one-half percentage point relative to the Budget assumptions by the end of the first year, then return to the base case rate

Table 2–6. BUDGET EFFECTS OF ALTERNATIVE SCENARIOS
(Fiscal years; in billions of dollars)

	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Alternative Budget Deficit Projections:											
Administration Economic Assumptions	649	564	531	458	413	503	512	504	530	482	434
percent of GDP	3.7%	3.1%	2.8%	2.3%	1.9%	2.3%	2.2%	2.1%	2.1%	1.8%	1.6%
Alternative Scenario 1	637	568	566	526	502	604	622	620	650	604	559
percent of GDP	3.7%	3.1%	3.0%	2.6%	2.4%	2.8%	2.7%	2.6%	2.6%	2.3%	2.1%
Alternative Scenario 2	626	531	499	428	377	448	435	399	391	303	211
percent of GDP	3.6%	2.9%	2.6%	2.1%	1.8%	2.0%	1.8%	1.6%	1.5%	1.1%	0.7%

over the ensuing two years. After real GDP and the unemployment rate have returned to their base case levels, most budget effects vanish except for persistent out-year interest costs associated with larger near-term deficits.

- The second block shows the effect of a reduction in real GDP growth by one percentage point sustained for one year, with no subsequent recoupment of the lost growth, accompanied by a permanent increase in the natural rate of unemployment (and of the actual unemployment rate) of one-half percentage point relative to the Budget assumptions. In this scenario, the level of GDP and taxable incomes are permanently lowered by the reduced growth rate in the first year. For that reason and because unemployment is permanently higher, the budget effects (including growing interest costs associated with larger deficits) continue to grow in each successive year.
- The budgetary effects are much larger if the growth rate of real GDP is permanently reduced by one percentage point even leaving the unemployment rate unchanged, as might result from a shock to productivity growth. These effects are shown in the third block. In this example, the cumulative increase in the budget deficit is many times larger than the effects in the first and second blocks.

For inflation and interest rates:

- The fourth block shows the effect of a one percentage point higher rate of inflation and one percentage point higher nominal interest rates maintained for the first year only. In subsequent years, the price level and nominal GDP would both be one percentage point higher than in the base case, but interest rates and future inflation rates are assumed to return to their base case levels. Receipts increase by somewhat more than outlays. This is partly due to the fact that outlays for annually appropriated spending are assumed to remain constant when projected inflation changes. Despite the apparent implication of these estimates, inflation cannot be relied upon to lower the budget deficit, mainly because policymakers have traditionally prevented inflation from permanently eroding the real value of spending.
- In the fifth block, the rate of inflation and the level of nominal interest rates are higher by one percentage point in all years. As a result, the price level and nominal GDP rise by a cumulatively growing

Chart 2-3. Real GDP: Alternative Projections

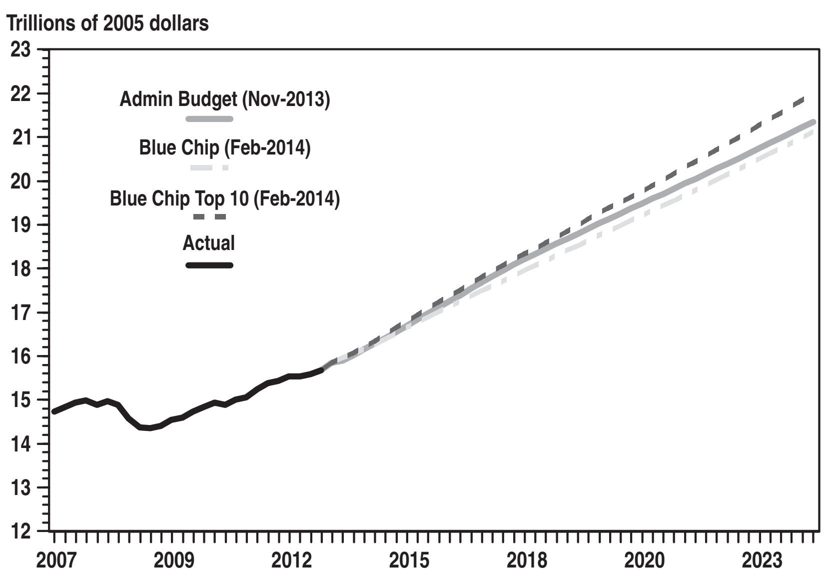
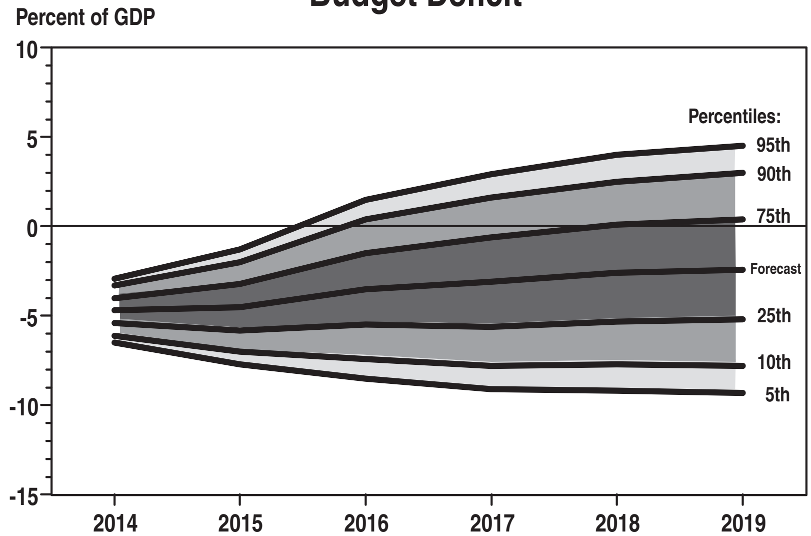


Chart 2-4. Range of Uncertainty for the Budget Deficit



percentage above their base levels. In this case, again the effect on receipts is more than the effect on outlays. As in the previous case, these results assume that annually appropriated spending remains fixed under the discretionary spending limits. Over the time period covered by the budget, leaving the discretionary limits unchanged would significantly erode the real value of this category of spending.

- The effects of a one percentage point increase in interest rates alone are shown in the sixth block. The outlay effect mainly reflects higher interest costs for Federal debt. The receipts portion of this rule-of-thumb is due to the Federal Reserve's deposit of earnings on its securities portfolio and the effect of interest rate changes on both individuals' income (and taxes) and financial corporations' profits (and taxes).
- The seventh block shows that a sustained one percentage point increase in inflation in the CPI and GDP price index decreases cumulative deficits substantially, due in part to the assumed erosion in the real value of appropriated spending. Note that the separate effects of higher inflation and higher interest rates shown in the sixth and seventh blocks do not sum to the effects for simultaneous changes in both shown in the fifth block. This is because the gains in budget receipts due to higher inflation result in higher debt service savings when interest rates are also assumed to be higher in the fifth block than when interest rates are assumed to be unchanged in the seventh block.
- The last entry in the table shows rules of thumb for the added interest cost associated with changes in the budget deficit, holding interest rates and other economic assumptions constant.

The effects of changes in economic assumptions in the opposite direction are approximately symmetric to those shown in the table. The impact of a one percentage point lower rate of inflation or higher real growth would have about the same magnitude as the effects shown in the table, but with the opposite sign.

Forecast Errors for Growth, Inflation, and Interest Rates

As discussed in the previous section, the single most important variable that affects the accuracy of the budget projections is the forecast of the growth rate of real GDP. The rate of inflation and the level of interest rates also have substantial effects on the accuracy of projections. Table 2-5 shows errors in short- and long-term projections in past Administration forecasts, and compares these errors to those of CBO and the Blue Chip Consensus of private forecasts for real GDP, inflation and short-term interest rates.[5]

In the forecasts made since 1982, over a two-year horizon, the average error in projecting the annual real GDP growth rate was near zero for the Administration, but over a six-year horizon growth was slightly overestimated.

[5] Two-year errors for real GDP and the GDP price index are the average annual errors in percentage points for year-over-year growth rates for the current year and budget year. For interest rates, the error is based on the average error for the level of the 91-day Treasury bill rate for the two-year and six-year period. Administration forecasts are from the budgets released starting in February 1982 (1983 Budget) and through February 2011 (2012 Budget), so that the last year included in the projections is 2012. The six-year forecasts are constructed similarly, but the last forecast used is from February 2007 (2008 Budget). CBO forecasts are from "The Budget and Economic Outlook" publications in January each year, and the Blue Chip forecasts are from their January projections.

Table 2–7. DIFFERENCES BETWEEN ESTIMATED AND ACTUAL SURPLUSES OR DEFICITS FOR FIVE-YEAR BUDGET ESTIMATES SINCE 1982

(Percent of GDP)

	Current year estimate	Budget year estimate	Estimate for budget year plus			
			One year (BY+1)	Two years (BY+2)	Three years (BY+3)	Four years (BY+4)
Average difference	0.6	–0.5	–1.4	–1.9	–2.4	–2.6
Average absolute difference	0.9	1.4	2.3	2.9	3.4	3.6
Standard deviation	1.0	1.9	2.7	3.1	3.3	3.2
Root Mean Squared Error	1.1	1.9	3.0	3.7	4.0	4.2

[1] A positive figure represents an overestimate of the deficit or an underestimate of the surplus.

[2] Average absolute difference is the difference without regard to sign.

Over both periods growth was slightly underestimated by the CBO and Blue Chip. Overall, the differences between the three forecasters were minor. The mean absolute error in the annual average growth rate was about 1.5 percentage point per year for all forecasters for two-year projections, and was about one-third smaller for all three for the six-year projections. The greater accuracy in the six-year projections could reflect a tendency of real GDP to revert at least partly to trend, though professional opinions on whether GDP growth is mean reverting are mixed. Another way to interpret the result is that it is hard to predict GDP around turning points in the business cycle, but somewhat easier to project the six-year growth rate based on assumptions about the labor force, productivity, and other supply-side factors that affect GDP.

Inflation, as measured by the GDP price index, was overestimated by all forecasters (with Blue Chip having the largest errors) for both the two-year and six-year projections, with larger errors for the six-year projections. This reflects the gradual disinflation over the 1980s and early 1990s, which was greater than most forecasters expected. Average errors for all three sets of forecasts since 1994 were close to zero (not shown).

The nominal interest rate on the 91-day Treasury bill was also overestimated by all three forecasters, with errors larger for the six-year time horizon. Again this reflects the secular decline in nominal interest rates over the past 30 years, reflecting lower inflation for most of the period, as well as a decline in real interest rates since 2000 resulting from weakness in the economy and Federal Reserve policy. The errors were somewhat less for the Administration than for CBO and the Blue Chip forecasts.

Alternative Scenarios

The rules of thumb described above can be used in combination to show the effect on the budget of alternative economic scenarios. Considering explicit alternative scenarios can also be useful in gauging some of the risks to the current budget projections. For example, the strength of the recovery over the next few years remains highly uncertain. Those possibilities are explored in the two alternative scenarios presented in this section and shown in Chart 2-3.

The first alternative scenario assumes that real GDP growth and unemployment beginning in 2013:Q4 follow the projections in the February 2014 Blue Chip forecast for the period through the end of 2015, and are extended through 2024 from the semi-annual October 2013 Blue Chip report. In this case, after 2013, the level of GDP remains lower than the Administration's forecast throughout the projection period. This alternative includes a smaller real recovery from the loss of output during the 2008-2009 recession. Growth returns to normal, but without a substantial catch-up to make up for previous output losses.

The second alternative is the average of the highest 10 real GDP projections of the Blue Chip forecasters, also based on the February and October forecasts. This forecast is slightly higher than the Administration's forecast through 2017 with the high-10 Blue Chip growth exceeding the Administration's considerably in the out years.

Table 2-6 shows the budget effects of these alternative scenarios compared with the Administration's economic forecast. Under the first alternative, budget deficits are significantly higher in each year compared with the Administration's forecast. In the second alternative, the deficit is modestly higher than the Administration's projection in the near term, but results in a substantially lower deficit in the long run and cumulatively over 10 years.

Many other scenarios are possible, of course, but the point is that the most important influences on the budget projections beyond the next year or two are the rate at which GDP and employment recover from the recession.

Uncertainty and the Deficit Projections

The accuracy of the Administration's budget projections depends not only on the accuracy of economic projections, but also on technical factors and the differences between proposed policy and enacted legislation. Table 2-7 shows total deficit errors as a percentage of GDP for the current-year forecast in each year's budget as well as the errors for the budget-year and four following years. As expected, the size of the average absolute errors increases the far-

Table 2–8. THE STRUCTURAL BALANCE
(Fiscal years; in billions of dollars)

	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Unadjusted surplus (–) or deficit	459	1,413	1,293	1,300	1,087	680	649	564	531	458	413	503	512	504	530	482	434
Cyclical component	–41	283	404	399	363	389	373	314	224	127	49	12	–4	2	–2	0	–0
Structural surplus (–) or deficit	500	1,129	889	900	724	290	276	249	307	331	364	491	516	501	532	481	434
(Fiscal years; percent of Gross Domestic Product)																	
Unadjusted surplus (–) or deficit	3.1%	9.8%	8.7%	8.4%	6.8%	4.1%	3.7%	3.1%	2.8%	2.3%	1.9%	2.3%	2.2%	2.1%	2.1%	1.8%	1.6%
Cyclical component	–0.3%	2.0%	2.7%	2.6%	2.3%	2.3%	2.2%	1.7%	1.2%	0.6%	0.2%	0.1%	–0.0%	0.0%	–0.0%	0.0%	–0.0%
Structural surplus (–) or deficit	3.4%	7.8%	6.0%	5.9%	4.5%	1.7%	1.6%	1.4%	1.6%	1.6%	1.7%	2.2%	2.2%	2.1%	2.1%	1.8%	1.6%

NOTE: The NAIRU is assumed to be 5.4%.

ther ahead in the future for which the year the projection is made. Average errors have overestimated the current year's deficit, but have underestimated future years by increasing amounts. The error measures can be used to show a probabilistic range of uncertainty of what the range of deficit outcomes may be over the next five years relative to the Administration's deficit projection. Chart 2-4 shows this cone of uncertainty, which is constructed under the assumption that future forecast errors would be governed by the normal distribution with a mean of zero and standard error equal to the root mean squared error, as a percent of GDP, of past forecasts. The deficit is projected to be 2.3 percent of GDP in 2019, but has a 90 percent chance of being within a range of a surplus of 4.6 percent of GDP and a deficit of 9.1 percent of GDP.

Structural and Cyclical Deficits

As shown above, the budget deficit is highly sensitive to the business cycle. When the economy is operating below its potential and the unemployment rate exceeds the level consistent with stable inflation, receipts are lower, outlays are higher, and the deficit is larger than it would be otherwise. These features serve as "automatic stabilizers" for the economy by restraining output when the economy threatens to overheat and cushioning economic downturns. They also make it hard to judge the overall stance of fiscal policy simply by looking at the unadjusted budget deficit.

An alternative measure of the budget deficit is called the structural deficit. This measure provides a more useful perspective on the stance of fiscal policy than does the unadjusted budget deficit. The portion of the deficit traceable to the response of the automatic stabilizers to the effects of the business cycle is called the cyclical component. The remaining portion of the deficit is called the structural deficit. The structural deficit is a better gauge of the underlying stance of fiscal policy than the unadjusted deficit because it removes most of the effects of the business cycle. So, for example, the structural deficit would include fiscal policy changes such as the 2009 Recovery Act, but not the automatic changes in unemployment insurance or reduction in tax receipts that would have occurred without the Act.

Estimates of the structural deficit, shown in Table 2-8, are based on the historical relationship between changes in the unemployment rate and real GDP growth, as well as relationships of unemployment and real GDP growth with receipts and outlays. These estimated relationships take account of the major cyclical changes in the economy and their effects on the budget, but they do not reflect all the possible cyclical effects on the budget, because economists have not been able to identify the cyclical factor in some of these other effects. For example, the sharp decline in the stock market in 2008 pulled down capital gains-related receipts and increased the deficit in 2009 and beyond. Some of this decline is cyclical in nature, but economists have not identified the cyclical component of the stock market with any precision, and for that reason, all of the stock market's effect on capital gains receipts is counted in the structural deficit.

Another factor that can affect the deficit and is related to the business cycle is labor force participation. Since the official unemployment rate does not include workers who have left the labor force, the conventional measures of potential GDP, incomes, and Government receipts understate the extent to which potential work hours are under-utilized because of a decline in labor force participation. The key unresolved question here is to what extent changes in labor force participation are cyclical and to what extent they are structural. By convention, in estimating the structural budget deficit, all changes in labor force participation are treated as structural.

There are also lags in the collection of tax revenue that can delay the impact of cyclical effects beyond the year in which they occur. The result is that even after the unemployment rate has fallen, receipts may remain cyclically depressed for some time until these lagged effects have dissipated. The recent recession added substantially to the estimated cyclical component of the deficit, but for all the reasons stated above, the cyclical component is probably understated. As the economy recovers, the cyclical deficit is projected to decline. After unemployment reaches 5.4 percent, the level assumed to be consistent with stable inflation, the estimated cyclical component vanishes, leaving only the structural deficit, although some lagged cyclical effects would arguably still be present.

Despite these limitations, the distinction between cyclical and structural deficits is helpful in understanding the path of fiscal policy. The large increase in the deficit in 2009 and 2010 is due to a combination of both components of the deficit. There was a large increase in the cyclical component because of the rise in unemployment. That is what would be expected considering the severity of the recent recession. Finally, there was a large increase in the structural deficit because of the policy measures taken to combat the recession. This reflects the Government's decision to make active use of fiscal policy to lessen the severity of the recession and to hasten economic recovery. Between 2014 and 2018, the cyclical component of the deficit is projected to decline sharply to near zero as the economy recovers at an above-trend rate of GDP growth. The structural deficit shrank by six percentage points between 2009 and 2013, reflecting the relatively sharp fiscal tightening measures taken during that period.

3. LONG TERM BUDGET OUTLOOK

The horizon for the detailed estimates of receipts and outlays in the President's Budget is 10 years. This 10-year horizon balances consideration of the future impacts of budget decisions made today with the practical limits on the construction of detailed budget projections for years in the future.

Decisions made today can have important repercussions beyond the 10-year horizon. Consequently, it is important to anticipate budgetary requirements beyond the 10-year horizon, and the effects of changes in policy on those requirements, despite the uncertainty surrounding the assumptions needed for such estimates. Long-run budget projections can be useful in drawing attention to potential problems that could become unmanageable if allowed to grow.

To this end, the budget projections in this chapter extend the 2015 Budget for 75 years through 2089. Because of the uncertainties involved in making long-run projections, results are presented for a base case and for several alternative scenarios embodying various assumptions.

Legislation since 2010 has led to significant improvements in the Nation's projected long-term fiscal health. First, the passage of the Affordable Care Act (ACA) in 2010 enacted cost-reduction mechanisms in the health sector that will directly reduce deficits by more than $1 trillion over the first two decades, according to the Congressional Budget Office (CBO), and have the potential to significantly reduce the trajectory of health spending, and future budget deficits, over the long run. Second, the Budget Control Act of 2011 (BCA) reduced the long-term outlay path by placing discretionary spending under tight limits and enacting cuts in mandatory spending through 2021. Third, enactment of the American Taxpayer Relief Act of 2012 (ATRA) increased income tax rates on the highest-income taxpayers, contributing $700 billion to deficit reduction in the first decade and increasing long-run tax receipts above prior projections.

The 2015 Budget includes further initiatives that would help control future deficits if enacted. There is significant uncertainty surrounding any long-term budget forecast, and additional reforms will be needed to ensure that programs like Medicare Part A and Social Security, which are financed from dedicated revenue sources, remain self-sustaining. Still, the long-run projections show that overall budgetary resources would be sufficient to support future spending over the long term if Budget policies and assumptions are carried forward.

The Long-Run Budget Outlook

When the current Administration took office, the budget deficit was rising sharply because of the declining economy and measures taken to revive it. Revenues had fallen, as a share of GDP, to their lowest level since 1950. Spending on countercyclical programs like unemployment insurance had also risen sharply. Economic recovery and spending and tax legislation have substantially reduced deficits over the last few years, and, as noted above, measures like the ACA, BCA, and ATRA will constrain future spending, increase revenues, and further narrow the deficit. The 2015 Budget also includes nearly $2.2 trillion in additional net deficit reduction over the next 10 years. Combined with the deficit reduction already enacted, by 2018 these savings would bring the Nation to the point where current non-interest expenditures are no longer adding to debt and where debt is decreasing as a share of the economy—a key metric of fiscal sustainability.

Beyond the 10-year horizon, demographic trends and relatively high costs for health care are likely to put upward pressure on the deficits and the debt. In the projections for the decade and a half beyond 2024, deficits as a share of GDP rise from the levels at the end of the 10-year budget window, mainly because the aging of the population and the continuing high costs of health care drive up outlays for Social Security, Medicare, and Medicaid as a share of GDP. Revenues also increase as a share of GDP, but at a more measured pace, leading deficits to peak at 2.5 percent of GDP in the mid 2030s and debt to remain flat near 69 percent of GDP through 2040.

By the mid 2030s, the easing of baby boom retirements, continued restraint in discretionary spending and health costs, and gradually rising revenues due to growing household incomes turn the country on a course toward resuming the reduction in the debt-to-GDP ratio. The budget reaches balance in 2053, when revenues are 20.9 percent of GDP, slightly higher than their levels during the budget surpluses of 1998-2001. The Federal Government is then projected to run surpluses over the remainder of the projection window, with publicly held debt falling rapidly until it reaches zero in 2072 (see Chart 3–1).

The Fiscal Gap

The 75-year fiscal gap is one measure of the size of the adjustment needed to preserve fiscal sustainability in the long run.[1] It is defined as the present value of the increase in taxes or reduction in non-interest expenditures over the next 75 years required for the ratio of Government debt to GDP at the end of the period to equal its current level. The gap can be measured in present value dollars or as a percentage of present value GDP. If publicly held debt at the end of the period is projected to be lower than current debt, there is a fiscal surplus rather than a fis-

[1] Alan J. Auerbach, "The U.S. Fiscal Problem: Where We Are, How We Got Here, and Where We're Going," NBER: Macroeconomics Annual 1994, pp 141 – 175.

cal gap. Table 3–2 shows 75-year fiscal gap or surplus calculations for the base case as well as under different assumptions. These values can be interpreted as the average level of deficit change needed each year from 2015 to 2089 to maintain the current level of debt held by the public as a percentage of GDP. Since debt in the base case eventually reaches zero, the base case has a fiscal surplus of 1.8 percent of GDP, which means that deficit reduction is not needed to reach the current level of debt at the end of the 75-year period.

By comparison, last year's long-run projections showed a 75-year fiscal surplus of 1.6 percent of GDP and debt peaking at 76 percent of GDP before beginning to decline, versus 69 percent of GDP this year.

Trends Underlying the Projections

The key to long-range fiscal sustainability is balancing the Government's commitments for major health and retirement programs—Medicare, Medicaid and Social Security—with sufficient tax receipts along with control in discretionary and non-entitlement spending, while allowing for additional entitlement reforms as appropriate.

- *Medicare*. Medicare's growth has generally exceeded that of other Federal spending for decades, tracking the growth in overall health care costs. Growth in overall national health costs has slowed to historically low rates in the past few years, with a corresponding slowdown in Medicare spending that is already yielding substantial fiscal dividends. Moreover, there is increasing evidence that part of the slowdown is structural, suggesting that it may continue into the future.[2] Nonetheless, despite the recent slowdown and ACA reforms that will help curtail future cost growth and improve health outcomes, Medicare spending is still projected to increase significantly as a share of the economy, due both to rising health costs and the aging population.
- *Medicaid*. Medicaid's growth has generally tracked the growth in Medicaid enrollment and overall per capita health spending, and therefore historically exceeded the growth rate of other Federal spending. Medicaid assistance will expand further beginning this year because of broadened coverage provided by the ACA. However, the ACA's reforms are also expected to reduce Medicaid per beneficiary spending growth in the long run, as Medicare cost containment spills over into the rest of the health sector.
- *Social Security*. Outlays for Social Security benefits will rise as a share of the economy over the next two decades as the population ages, putting pressure on the long-term budget.
- *Discretionary spending*. Discretionary spending for both defense and nondefense programs will continue to shrink relative to the economy as discretionary spending limits hold this form of spending to growth rates lower than inflation through 2021. It is unlikely that the growth in discretionary spending will remain lower than inflation over the very long term, so, after the end of the 10-year budget window, the projections allow for growth with inflation and population growth to effectively hold discretionary spending constant on a real per capita basis. This is a conservative assumption that results in a higher growth rate than that assumed in the 10-year baselines of the Office of Management and Budget (OMB) and the CBO in the absence of discretionary spending limits. (Because economic growth exceeds inflation and population growth, discretionary spending

[2] Council of Economic Advisors, "Trends in Health Care Cost Growth and the Role of the Affordable Care Act," November 2013, p 10.

Chart 3-1. Publicly Held Debt Under 2015 Budget Policy Extended

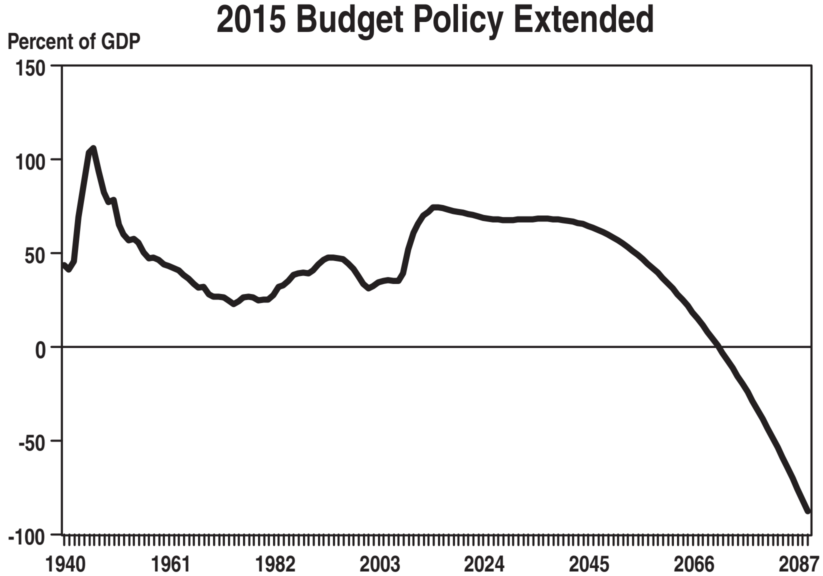


Table 3–1. LONG-RUN BUDGET PROJECTIONS
(As a Percent of GDP)

	1980	1990	2000	2010	2020	2030	2040	2050	2060	2070	2080	2085
Receipts	18.5	17.4	19.9	14.6	19.2	19.7	20.1	20.7	21.4	22.1	22.8	23.1
Outlays:												
Discretionary	9.9	8.5	6.1	9.1	5.1	4.2	3.6	3.1	2.7	2.3	2.0	1.9
Mandatory:												
Social Security	4.2	4.2	4.0	4.7	5.1	5.8	5.8	5.6	5.7	5.8	5.8	5.8
Medicare	1.1	1.6	1.9	3.0	3.0	3.8	4.3	4.4	4.6	4.7	4.8	4.8
Medicaid	0.5	0.7	1.2	1.8	1.9	2.2	2.5	2.7	2.7	2.8	2.8	2.7
Other	3.6	3.1	2.3	3.3	3.7	3.2	3.0	2.8	2.6	2.5	2.4	2.4
Subtotal, mandatory	9.4	9.6	9.4	12.9	13.7	14.9	15.6	15.5	15.5	15.8	15.8	15.8
Net interest	1.9	3.1	2.2	1.3	2.7	3.0	3.0	2.6	1.7	0.3	–1.6	–2.7
Total outlays	21.1	21.2	17.6	23.4	21.4	22.1	22.2	21.3	19.9	18.3	16.2	14.9
Surplus (+) or deficit (–)	–2.6	–3.7	2.3	–8.7	–2.2	–2.4	–2.2	–0.6	1.5	3.7	6.6	8.2
Primary Surplus (+) or deficit (–)	–0.8	–0.6	4.5	–7.4	0.4	0.6	0.9	2.1	3.2	4.0	5.0	5.5
Federal debt (+) or asset (–) held by the public, end of period	25.5	40.8	33.6	61.0	71.6	67.9	67.8	58.6	37.0	4.6	–38.1	–64.2

Note: The figures shown in this table beyond 2020 are the product of a long-range forecasting model maintained by the Office of Management and Budget. This model is separate from the models and capabilities that produce detailed programmatic estimates in the Budget. It was designed to produce long-range projections based on additional assumptions regarding growth in the economy, the long-range evolution of specific programs, and the demographic and economic forces affecting those programs. The model, its assumptions, and sensitivity testing of those assumptions are presented in this chapter.

continues to decline as a share of the economy, but more slowly.)

- *Revenues*. Without any further changes in tax law, revenues will gradually rise as a share of the economy over the 75-year horizon. This occurs because individuals' real incomes grow over time, and so a portion of their income falls into higher tax brackets (which are indexed for inflation). The projections take into account the automatic growth in revenues that would result under a continuation of 2015 Budget policies, consistent with how they treat automatic growth in Social Security, Medicare, and other mandatory spending programs.

The long-run projections presented here are not intended to be a prediction of future legislative action, nor are they intended to reflect explicit policy proposals for the years beyond 2024. In particular, it would be unrealistic and undesirable for revenues to continue to increase and discretionary spending to continue to fall as a share of GDP over the long run even as the Federal Government ran large surpluses, paid off its entire debt, and began accumulating assets, as shown in Table 3–1. The purpose of the long-run forecast shown here is simply to provide an extension of budget policies against which to evaluate the Nation's fiscal condition and potential changes in policy. The forecast shows that, under 2015 Budget policies, in the long run the budget does not run deficits or increase the debt.

Future budget outcomes depend on a host of unknowns—changing economic conditions, unforeseen international developments, unexpected demographic shifts, and the unpredictable forces of technological advance, along with future legislated changes. These uncertainties make even short-run budget forecasting quite difficult, and the uncertainties increase the further into the future projections are extended. A full treatment of all the relevant risks is beyond the scope of this chapter, but the chapter does show how sensitive long-run budget projections are to changes in some key assumptions. Alternatives presented in this chapter range from altering assumptions for major policy levers such as discretionary spending and revenue growth to changes in economic variables such as productivity. As demonstrated later, these changes can have a dramatic effect on the long-term fiscal sustainability of the Government's finances, with debt-to-GDP ratios even 40 years in the future ranging from 49 percent in the base case to 104 percent in the most pessimistic scenario and -31 percent in the most optimistic scenario.

Key Drivers of Program Growth: Health Costs and Demographic Changes

Health Costs.—Health care costs have risen faster than inflation for decades. That growth has slowed to historic lows in the past few years. While some of the slowdown reflects the recession, there is increasing evidence that the deceleration is also due in part to structural changes. For example, since Medicare beneficiaries are typically retired or disabled, Medicare cost growth tends to be less sensitive to economic conditions than overall health care spending. But Medicare cost growth has slowed over the past few years in line with the overall slowdown in health care costs, and Medicare per-beneficiary spending growth has been below overall health care per capita growth. There is some evidence that the reforms enacted in the Affordable Care Act are already contributing to the health care cost slowdown, for example by reducing Medicare excessive payments to private insurers and providers and creating strong incentives for hospitals to reduce readmission rates. Going forward, the ACA (and additional reforms proposed in the 2015 Budget) will

Table 3–2. 75-YEAR FISCAL GAP (–)/SURPLUS (+) UNDER ALTERNATIVE BUDGET SCENARIOS
(Percent of GDP)

2015 Base Case	1.8
Immigration:	
Immigration reform extended	2.6
Health:	
Excess cost growth averages 0%	3.3
Excess cost growth averages 1%	1.2
Discretionary Outlays:	
Grow with inflation	2.1
Grow with GDP	0.6
Revenues:	
Income tax brackets are regularly increased	0.6
Productivity:	
Productivity grows by 0.25 percentage point per year faster than the base case	3.7
Productivity grows by 0.25 percentage point per year slower than the base case	–0.2
Combined:	
Optimistic (higher productivity and lower health cost growth)	4.6
Pessimistic (lower productivity and higher health cost growth)	–0.7

have a larger impact on health care cost and quality, and, when the law is fully implemented, Medicare spending per beneficiary will rise at rates substantially below those at which spending has grown for four decades.

Even with these changes, however, overall health care spending is likely to continue to increase as a share of the economy as the population ages. The base case projections assume that the provisions of the ACA are fully implemented, limiting health care costs in the long run compared with prior law. The long-run Medicare assumptions for the years following the 10-year budget window are essentially the same as those in the latest Medicare Trustees' report (May 2013), except the projections include the Budget's proposal to strengthen the Independent Payment Advisory Board (IPAB) by lowering the target growth rate to 0.5 percentage points above GDP per capita.[3] Generally, the IPAB mechanism helps to control excess cost growth in the two decades after the budget window, before excess cost growth dips below the proposed threshold due to the Trustees' long-range assumptions affecting the overall health sector. The Trustees' projections imply that average long-run annual growth in Medicare spending per enrollee, with current-law IPAB in place, is 0.4 percentage points per year faster than the projected growth rate in GDP per capita, but the growth rate slows to about 0.3 percentage points with a strengthened IPAB. This growth rate for Medicare is significantly smaller than previous projections prior to the passage of the ACA—a reduction the Trustees largely attribute to the ACA-mandated changes to certain Medicare payment rates—but is higher than the projections in the 2013 Budget, when a refinement in the long-run pre-ACA cost growth assumption for Medicare was introduced, as recommended by the Medicare Technical Review Panel and included in the 2012 and 2013 Trustees' reports.

Along with the rules for Medicare, there are a number of reforms in the ACA that experts believe could produce significant savings relative to the historical trend and that would affect medical costs more broadly. One is an excise tax on the highest-cost insurance plans, which will encourage substitution of plans with lower costs, while raising take-home pay. The ACA also includes an array of delivery system reforms, including incentives for accountable care organizations and payment reform demonstrations that have the potential to re-orient the medical system toward providing higher quality care, not just more care, and thus reduce cost growth in the future.[4] Because of these broader reforms, Medicaid spending per beneficiary and private health spending per capita are also projected to slow, though not as much as Medicare.[5]

Elderly Population.—An aging population also poses a serious long-run budgetary challenge, particularly through its effects on Social Security, Medicare, and Medicaid long-term care costs. In 2008, when the oldest members of the baby boom generation became eligible for early retirement under Social Security, the ratio of workers to Social Security beneficiaries was 3.2. That ratio is currently around 2.8, and the Social Security actuaries project it to fall to a level of 2.5 in 2021 and 2.1 in 2031, at which point most of the baby boomers will have retired. Because of lower expected fertility and improved longevity, the actuaries project that the ratio will decline very slowly thereafter, reaching 1.9 by 2089.

With fewer workers to pay the taxes needed to support the retired population, budgetary pressures will steadily mount. Social Security program costs will grow from 4.9 percent of GDP today to a peak of 5.9 percent of GDP in 2089, with about 0.5 percentage points of this growth occurring by 2024, the end of the standard 10-year budget window. Without reforms, trust fund exhaustion is projected by the Social Security Trustees to occur in 2033, after which time the Trustees project annual income to the trust funds will be sufficient to pay about 77 percent of scheduled benefits. In the projections here, however, Social Security payments are supported by transfers from general revenues, as discussed below.

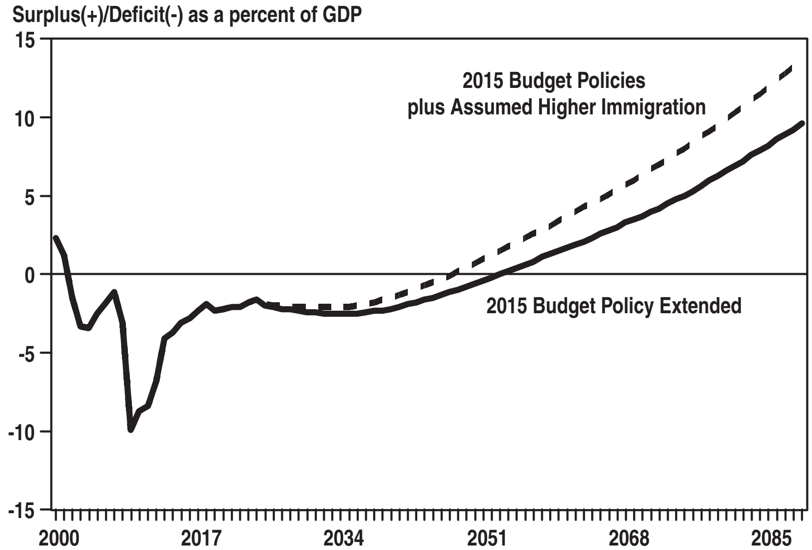
Other Programs.— Other mandatory programs are generally projected to decline relative to the size of the economy. These include Federal pension benefits for

[3] The ACA established an Independent Payment Advisory Board (IPAB) that is required to propose changes in Medicare should Medicare costs exceed target growth rates specified in law; such IPAB-proposed changes would take effect automatically, unless overridden by the Congress. The Budget includes a proposal that would strengthen the IPAB mechanism by lowering the target growth rate applicable for 2020 onward from GDP +1.0 percentage points to GDP +0.5 percentage points.

[4] Groups of providers meeting certain criteria can be recognized as accountable care organizations (ACOs), which allow them to coordinate care and manage chronic disease more easily thereby improving the quality of care for patients. ACOs can then share in any cost savings they achieve for Medicare if they meet quality standards.

[5] The projections assume that growth in Medicaid spending per enrollee and private health spending per capita exceeds growth in GDP per capita by just under 0.7 percentage points.

Chart 3-2. Higher Immigration



Government workers. The shift in the 1980s from the traditional Federal pension benefit of the Civil Service Retirement System (CSRS) to the much smaller defined benefit pension plan of the Federal Employees Retirement System (FERS) is having a marked effect on Federal civilian pensions, which is expected to continue as FERS comes to dominate future pension projections. Recent reforms in FERS have increased employee contributions to the system, but have left the eventual FERS retirement benefit levels unchanged. As a result of the shift from CSRS to FERS, spending for Federal retirement is expected to permanently shrink relative to the size of the economy over the next 75 years. Most other entitlement programs are also expected to grow more slowly than GDP due mainly to falling poverty and population growth rates over the very long run.

Alternative Policy, Economic, and Technical Assumptions

The quantitative results discussed above are sensitive to changes in underlying policy, economic, and technical assumptions. Some of the most important of these assumptions and their effects on the budget outlook are discussed below. It is important to note that these paths are merely illustrative; they are not intended to represent the policy preferences of this Administration or the predicted actions of future Administrations and Congresses.

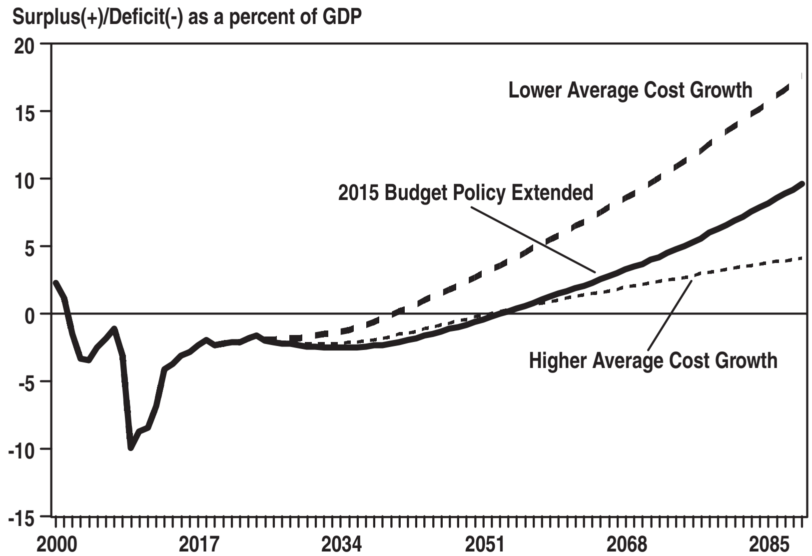
Immigration Reform.— While the Budget includes an allowance for deficit reduction from commonsense immigration reform, the long-term projections conservatively exclude the effects of immigration reform, with the rate of net immigration assumed to average around 1.1 million immigrants per year in the long run (see Chart 3–2).[6] Higher net immigration relieves some of the downward pressure on population growth from low fertility and allows total population to expand throughout the projection period, although at a much slower rate than has prevailed historically. With higher net immigration flows of 0.5 million per year (roughly in line with the CBO forecasts based on the Senate-passed immigration bill's reforms to the legal immigration system), the 75-year fiscal surplus rises from 1.8 percent of 75-year present value GDP in the base case to 2.6 percent of GDP, and the debt-to-GDP ratio falls steadily throughout the projection period, instead of holding stable for a decade before beginning to fall, as in the base case.

Health Spending.—The base projections for Medicare and Medicaid over the next 75 years assume an extension of current law and the policies in the 2015 Budget. The health cost alternatives illustrated in Chart 3–3 assume that medical costs rise more rapidly or more slowly than in the base case. The first alternative assumes that costs per beneficiary rise at one percentage point per year above GDP per capita in the entire health sector, while the second alternative assumes zero growth above GDP per capita in the health sector. Table 3–2 shows the effect of these alternatives on the 75-year present value fiscal surplus, which falls from 1.8 percent of 75-year present value GDP in the base case to 1.2 percent of GDP in the high health cost growth scenario and rises to 3.3 percent of GDP in the low health cost growth scenario.

Discretionary Spending.— The current base projection for discretionary spending assumes that after 2024, discretionary spending grows with inflation and population (see Chart 3–4). An alternative assumption would be to allow discretionary spending to keep pace with the economy and grow with GDP. Yet another possible assumption is to only allow discretionary spending to grow

[6] The *Analytical Perspectives* volume of the *Fiscal Year 2014 Budget* included an analysis of the effects of alternative fertility, mortality, and immigration assumptions. The underlying assumptions were drawn from the high-cost and low cost-alternatives presented in the 2012 Social Security Trustees' report. The results are summarized on p. 56 of the *Analytical Perspectives* volume (www.whitehouse.gov/sites/default/files/omb/budget/fy2014/assets/econ_analyses.pdf)

Chart 3-3. Alternative Health Care Costs



with inflation. As shown in Table 3–2, the 75-year fiscal surplus falls from 1.8 percent of 75-year present value GDP in the base case to 0.6 percent of GDP in the growth with GDP scenario, and rises to 2.1 percent of GDP in the growth with inflation scenario.

Alternative Revenue Projections.—In the base projection, tax receipts rise gradually relative to GDP as real incomes rise. Chart 3–5 shows alternative receipts assumptions. Assuming that Congress will act to cut taxes to avoid the revenue increases associated with rising incomes would bring about higher deficits and publicly held debt throughout the 75-year horizon. The 75-year fiscal surplus falls from 1.8 percent of 75-year present value GDP in the base case to 0.6 percent of GDP in the alternative scenario.

Productivity.—The rate of future productivity growth has a major effect on the long-run budget outlook (see Chart 3–6). It is also highly uncertain. Over the next few decades, an increase in productivity growth would reduce projected budget deficits. Higher productivity growth adds directly to the growth of the major tax bases, while it has a smaller immediate effect on outlay growth. For much of the last century, output per hour in nonfarm business grew at an average rate of around 2.2 percent per year, despite long periods of sustained output growth at notably higher and lower rates than the long term average.

The base projections assume that real GDP per hour worked will grow at an average annual rate of 1.7 percent per year. The alternative scenarios highlight the effect of raising and lowering the projected productivity growth rate by 1/4 percentage point. The 75-year fiscal surplus rises from 1.8 percent of 75-year present value GDP in the base case to 3.7 percent of GDP in the faster productivity

Chart 3-4. Alternative Discretionary Projections

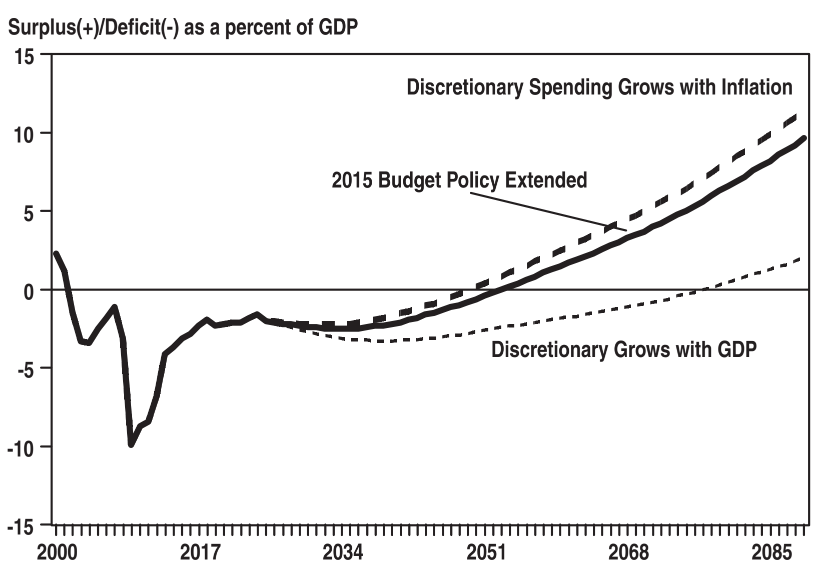
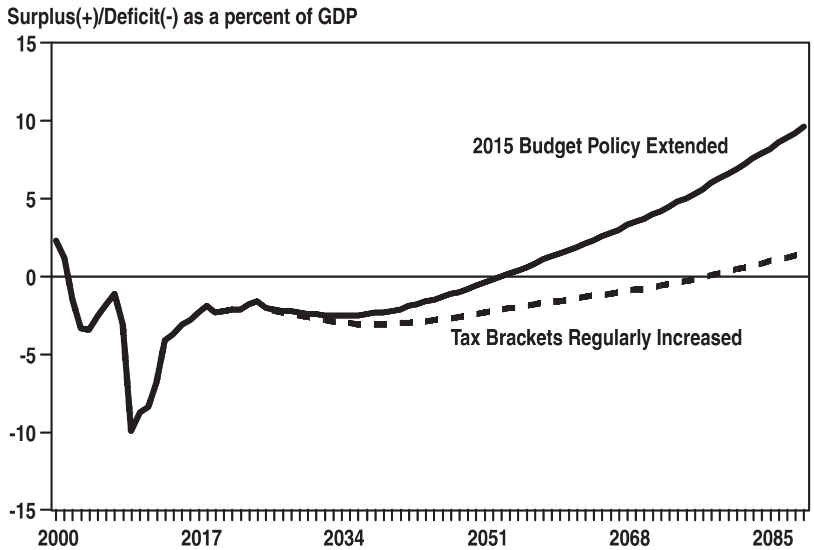


Chart 3-5. Alternative Revenue Projections



scenario, but falls to a fiscal gap of 0.2 percent of GDP in the slower productivity scenario.

The long-run budget outlook is highly uncertain (see Chart 3–7). With pessimistic assumptions, the fiscal picture can quickly deteriorate back into deficits and rising debt. For example, combining the assumptions of lower productivity growth and higher-than-expected health care cost growth leads to a potential fiscal gap of 0.7 percent of GDP. Conversely, more optimistic assumptions imply an even earlier return to surpluses and declining debt. Combining the alternatives of higher productivity and lower-than-expected health care cost growth leads to a potential fiscal surplus of 4.6 percent of GDP. These projections highlight the need for policy awareness and potential action to address the main drivers of future budgetary costs.

Actuarial Projections for Social Security and Medicare

While the Administration's long-run projections focus on the unified budget outlook, Social Security and Medicare Hospital Insurance benefits are paid out of trust funds financed by dedicated payroll tax revenue. Though the unified budget is in long-run balance under these projections, dedicated revenues to the trust funds fall short of the levels necessary to finance benefit costs.

The Social Security and Medicare Trustees' reports feature the actuarial balance of the trust funds as a summary measure of their financial status. For each trust fund, the balance is calculated as the change in receipts or program benefits (expressed as a percentage of taxable payroll) that would be needed to preserve a small positive balance in the trust fund at the end of a speci-

Chart 3-6. Alternative Productivity Assumptions

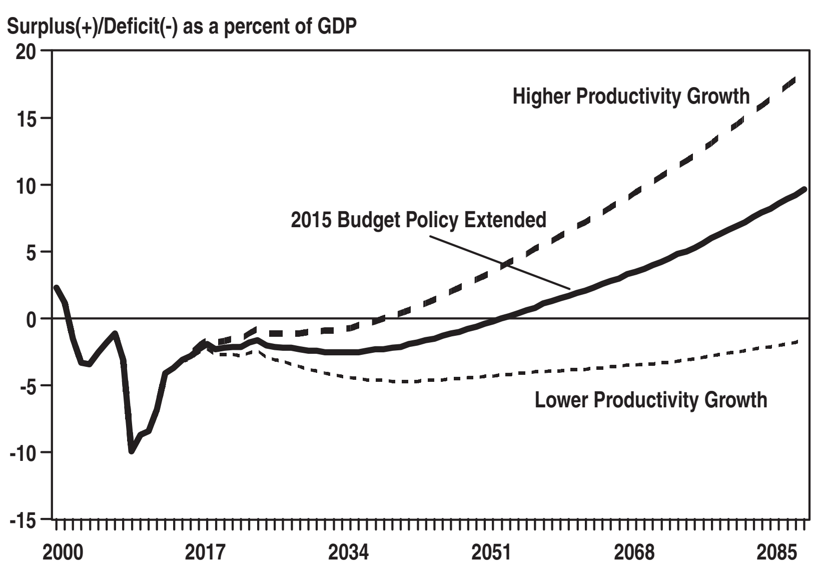
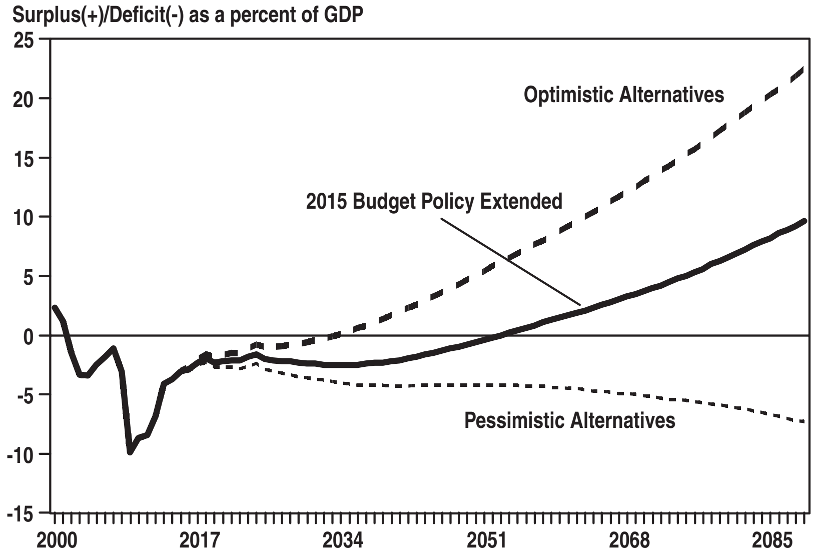


Chart 3-7. Combined Alternatives



fied time period. The estimates cover periods ranging in length from 25 to 75 years. These balance calculations show what it would take to achieve a positive trust fund balance at the end of a specified period of time, not what it would take to maintain a positive balance indefinitely. To maintain a positive balance forever requires a larger adjustment than is needed to maintain a positive balance over 75 years when the annual balance in the program is negative at the end of the 75-year projection period, as it is expected to be for Social Security and Medicare without future reforms.

Table 3–3 shows the projected income rate, cost rate, and annual balance for the Medicare HI and combined OASDI Trust Funds at selected dates under the Trustees' intermediate assumptions. Data from the 2011 and the 2012 reports are shown along with the latest data from the 2013 reports. Even following the passage of the ACA in 2010, there is a continued imbalance in the long-run projections of the HI program due to demographic trends and continued high per-person costs. In the 2011 Trustees' report, Medicare HI trust fund costs as a percentage of Medicare covered payroll were projected to rise from 3.7 percent to 5.0 percent between 2012 and 2080 and the HI trust fund imbalance was projected to be -0.7 percent in 2080. In the 2012 report, costs rose from 3.7 percent of Medicare taxable payroll in 2012 to 6.3 percent in 2080 and the imbalance in the HI trust fund in 2080 was -2.0 percent. On average, the HI cost rate declined slightly in the 2013 report compared with 2012. In the 2013 report, HI costs rise from 3.7 percent of Medicare taxable payroll in 2010 to 5.9 percent in 2080 and the imbalance in the HI trust fund in 2080 is -1.7 percent.

Under the Medicare Modernization Act (MMA) of 2003, the Medicare Trustees must issue a "warning" when in two consecutive Trustees' reports they project that the share of Medicare funded by general revenues will exceed 45 percent in the current year or any of the subsequent six years. Such a warning was included in the 2013 Trustees' Report. The MMA requires that the President submit legislation, within 15 days of submitting the Budget, which will reduce general revenue funding to 45 percent of overall Medicare outlays or lower in the immediate seven-fiscal-year window. In accordance with the Recommendations Clause of the Constitution and as the Executive Branch has noted in prior years, the Executive Branch considers this requirement to be advisory and not binding. However, the proposals in this Budget would further strengthen Medicare's finances and extend its solvency.

As a result of reforms legislated in 1983, Social Security had been running a cash surplus with taxes exceeding costs up until 2009. This surplus in the Social Security trust fund helped to hold down the unified budget deficit. The cash surplus ended in 2009, when the trust fund began using a portion of its interest earnings to cover benefit payments. The 2013 Social Security Trustees' report projects that the trust fund will not return to cash surplus without further reforms. Even so, the program will continue to experience an overall surplus for some years because of the interest earnings. Eventually, however, Social Security will begin to draw on its trust fund balances to cover current expenditures. Over time, as the ratio of workers to retirees falls, costs are projected to rise further from 13.8 percent of Social Security covered payroll in 2012 to 14.3 percent of payroll in 2020, 16.5 percent of payroll in 2030 and 17.8 percent of payroll in 2080. Revenues excluding interest are projected to rise only slightly from 12.8 percent of payroll today to 13.2 percent in 2080. Thus the annual balance is projected to decline from -1.0 percent of payroll in 2012 to -1.3 percent of payroll in 2020, -3.4 percent of payroll in 2030, and -4.5 percent of payroll in 2080. On a 75-year basis, the actuarial deficit is projected to be -2.7 percent of payroll. In the process, the Social Security trust fund, which was built up since 1983, would be drawn down and eventually be exhausted in 2033. These projections assume that benefits

Table 3–3. INTERMEDIATE ACTUARIAL PROJECTIONS FOR OASDI AND HI

	2012	2020	2030	2050	2080
	Percent of Payroll				
Medicare Hospital Insurance (HI)					
Income Rate					
2011 Trustees' Report	3.2	3.5	3.6	3.9	4.3
2012 Trustees' Report	3.2	3.5	3.7	3.9	4.3
2013 Trustees' Report	3.2	3.4	3.6	3.9	4.2
Cost Rate					
2011 Trustees' Report	3.7	3.6	4.4	5.1	5.0
2012 Trustees' Report	3.7	3.6	4.7	5.8	6.3
2013 Trustees' Report	3.7	3.5	4.5	5.4	5.9
Annual Balance					
2011 Trustees' Report	–0.6	–0.2	–0.8	–1.2	–0.7
2012 Trustees' Report	–0.5	–0.2	–1.0	–1.9	–2.0
2013 Trustees' Report	–0.5	–0.1	–0.8	–1.6	–1.7
Projection Interval:			25 years	50 years	75 years
Actuarial Balance: 2011 Trustees' Report			–0.5	–0.8	–0.8
Actuarial Balance: 2012 Trustees' Report			–0.7	–1.2	–1.4
Actuarial Balance: 2013 Trustees' Report			–0.6	–1.0	–1.1
	Percent of Payroll				
Old Age Survivors and Disability Insurance (OASDI)					
Income Rate					
2011 Trustees' Report	12.9	13.1	13.2	13.2	13.3
2012 Trustees' Report	12.9	13.1	13.3	13.3	13.3
2013 Trustees' Report	12.8	13.0	13.1	13.2	13.2
Cost Rate					
2011 Trustees' Report	13.2	14.2	16.7	16.7	17.4
2012 Trustees' Report	13.8	14.4	17.0	17.1	17.6
2013 Trustees' Report	13.8	14.3	16.5	16.8	17.8
Annual Balance					
2011 Trustees' Report	–0.4	–1.1	–3.5	–3.4	–4.1
2012 Trustees' Report	–0.9	–1.3	–3.8	–3.8	–4.3
2013 Trustees' Report	–1.0	–1.3	–3.4	–3.6	–4.5
Projection Interval:			25 years	50 years	75 years
Actuarial Balance: 2011 Trustees' Report			–0.6	–1.8	–2.2
Actuarial Balance: 2012 Trustees' Report			–1.2	–2.3	–2.7
Actuarial Balance: 2013 Trustees' Report			–1.3	–2.3	–2.7

would continue to be paid in full despite the projected exhaustion of the trust fund to show the long-run implications of current benefit formulas. Under current law, not all scheduled benefits would be paid after the trust funds are exhausted. However, benefits could still be partially funded from current revenues. The 2013 Trustees' report presents projections on this point. Beginning in 2033, 77 percent of projected Social Security scheduled benefits would be funded. This percentage would eventually decline to 72 percent by 2087.

TECHNICAL NOTE: SOURCES OF DATA AND METHODS OF ESTIMATING

The long-run budget projections are based on demographic and economic assumptions. A simplified model of the Federal budget, developed at OMB, is used to compute the budgetary implications of these assumptions.

Demographic and Economic Assumptions.—For the years 2014-2024, the assumptions are drawn from the Administration's economic projections used for the 2015 Budget. These budget assumptions reflect the President's policy proposals. The economic assumptions are extended beyond this interval by holding inflation, interest rates, and the unemployment rate constant at the levels assumed in the final year of the budget forecast. Population growth and labor force growth are extended using the intermediate assumptions from the 2013 Social

Security Trustees' report. The projected rate of growth for real GDP is built up from the labor force assumptions and an assumed rate of productivity growth. Productivity growth, measured as real GDP per hour, is assumed to equal its average rate of growth in the Budget's economic assumptions—1.7 percent per year.

CPI inflation holds stable at 2.3 percent per year, the unemployment rate is constant at 5.4 percent, the yield on 10-year Treasury notes is steady at 5.1 percent, and the 91-day Treasury bill rate is 3.7 percent. Consistent with the demographic assumptions in the Trustees' reports, U.S. population growth slows from around 1 percent per year to about two-thirds that rate by 2030, and slower rates of growth beyond that point. By the end of the projection period total population growth is nearly as low as 0.4 percent per year. Real GDP growth is projected to be less than its historical average of around 3.4 percent per year because the slowdown in population growth and the increase in the population over age 65 reduce labor supply growth. In these projections, real GDP growth averages between 2.1 percent and 2.3 percent per year for the period following the end of the 10-year budget window.

The economic and demographic projections described above are set by assumption and do not automatically change in response to changes in the budget outlook. This is unrealistic, but it simplifies comparisons of alternative policies.

Budget Projections.—For the period through 2024, receipts follow the 2015 Budget's policy projections. After 2024, total tax receipts rise gradually relative to GDP as real incomes also rise. Discretionary spending follows the path in the Budget over the next 10 years and grows at the rate of growth in inflation plus population afterwards. Other spending also aligns with the Budget through the budget horizon. Long-run Social Security spending is projected by the Social Security actuaries using this chapter's long-run economic and demographic assumptions. Medicare benefits are projected based on a projection of beneficiary growth and excess health care cost growth from the 2013 Medicare Trustees' report, as adjusted to account for the Budget's IPAB proposal, and the general inflation assumptions described above. Medicaid outlays are based on the economic and demographic projections in the model. Other entitlement programs are projected based on rules of thumb linking program spending to elements of the economic and demographic projections such as the poverty rate.

4. FEDERAL BORROWING AND DEBT

Debt is the largest legally and contractually binding obligation of the Federal Government. At the end of 2013, the Government owed $11,983 billion of principal to the individuals and institutions who had loaned it the money to fund past deficits. During that year, the Government paid the public approximately $259 billion of interest on this debt. At the same time, the Government also held financial assets, net of other financial liabilities, of $1,056 billion. Therefore, debt net of financial assets was $10,926 billion.

The $11,983 billion debt held by the public at the end of 2013 represents an increase of $701 billion over the level at the end of 2012. In 2013, the $680 billion deficit and other financing transactions totaling $22 billion caused the Government to increase its borrowing from the public by $701 billion. Debt held by the public increased from 70.1 percent of Gross Domestic Product (GDP) at the end of 2012 to 72.1 percent of GDP at the end of 2013.[1] Meanwhile, financial assets net of liabilities grew by $56 billion in 2013. Debt held by the public net of financial assets increased from 63.9 percent of GDP at the end of 2012 to 65.7 percent of GDP at the end of 2013. The deficit is estimated to fall to $649 billion, or 3.7 percent of GDP, in 2014, and to fall below 3 percent of GDP starting in 2016. With declining deficits and continued GDP growth, debt held by the public is projected to reach 74.4 percent of GDP at the end of 2014 and to peak at 74.6 percent at the end of 2015, after which it is projected to decline for the remainder of the 10-year budget window, reaching 69.0 percent of GDP at the end of 2024. Debt net of financial assets is expected to increase to 66.8 percent of GDP at the end of 2014, then decrease to 66.6 percent at the end of 2015 and continue to decrease in each of the following years.

Trends in Debt Since World War II

Table 4–1 depicts trends in Federal debt held by the public from World War II to the present and estimates from the present through 2019. (It is supplemented for earlier years by Tables 7.1–7.3 in *Historical Tables*, which is published as a separate volume of the Budget.) Federal debt peaked at 106.1 percent of GDP in 1946, just after the end of the war. From then until the 1970s, Federal debt as a percentage of GDP decreased almost every year because of relatively small deficits, an expanding economy, and inflation. With households borrowing large amounts to buy homes and consumer durables, and with businesses borrowing large amounts to buy plant and equipment, Federal debt also decreased almost every year as a percentage of total credit market debt outstanding. The cumulative effect was impressive. From 1950 to 1975, debt held by the public declined from 78.5 percent of GDP to 24.5 percent, and from 53.3 percent of credit market debt to 18.4 percent. Despite rising interest rates, interest outlays became a smaller share of the budget and were roughly stable as a percentage of GDP.

Federal debt relative to GDP is a function of the Nation's fiscal policy as well as overall economic conditions. During the 1970s, large budget deficits emerged as spending grew faster than receipts and as the economy was disrupted by oil shocks and rising inflation. The nominal amount of Federal debt more than doubled, and Federal debt relative to GDP and credit market debt stopped declining after the middle of the decade. The growth of Federal debt accelerated at the beginning of the 1980s, due in large part to a deep recession, and the ratio of Federal debt to GDP grew sharply. It continued to grow throughout the 1980s as large tax cuts, enacted in 1981, and substantial increases in defense spending were only partially offset by reductions in domestic spending. The resulting deficits increased the debt to almost 48 percent of GDP by 1993. The ratio of Federal debt to credit market debt also rose, though to a lesser extent. Interest outlays on debt held by the public, calculated as a percentage of either total Federal outlays or GDP, increased as well.

The growth of Federal debt held by the public was slowing by the mid-1990s. In addition to a growing economy, three major budget agreements were enacted in the 1990s, implementing spending cuts and revenue increases and significantly reducing deficits. The debt declined markedly relative to both GDP and total credit market debt, from 1997 to 2001, as surpluses emerged. Debt fell from 47.8 percent of GDP in 1993 to 31.4 percent of GDP in 2001. Over that same period, debt fell from 26.4 percent of total credit market debt to 17.5 percent. Interest as a share of outlays peaked at 16.5 percent in 1989 and then fell to 8.9 percent by 2002; interest as a percentage of GDP fell by a similar proportion.

The impressive progress in reducing the debt burden stopped and then reversed course beginning in 2002. A decline in the stock market, a recession, and the initially slow recovery from that recession all reduced tax receipts. The tax cuts of 2001 and 2003 had a similarly large and longer-lasting effect, as did the costs of the wars in Iraq and Afghanistan. Deficits ensued and debt began to rise, both in nominal terms and as a percentage of GDP. There was a small temporary improvement in 2006 and 2007 as economic growth led to a short-lived revival of receipt growth.

As a result of the most recent recession, which began in December 2007, and the massive financial and economic challenges it imposed on the Nation, the deficit

[1] These figures reflect the revisions to GDP released by the Department of Commerce's Bureau of Economic Analysis as part of the July 2013 revisions to the National Income and Product Accounts (NIPA). The revisions increased historical levels of GDP, thereby reducing historical figures for debt as a percent of GDP.

Table 4–1. TRENDS IN FEDERAL DEBT HELD BY THE PUBLIC
(Dollar amounts in billions)

Fiscal Year	Debt held by the public:		Debt held by the public as a percent of:		Interest on the debt held by the public as a percent of:[3]	
	Current dollars	FY 2013 dollars[1]	GDP	Credit market debt[2]	Total outlays	GDP
1946	241.9	2,342.9	106.1	N/A	7.4	1.8
1950	219.0	1,716.3	78.5	53.3	11.4	1.7
1955	226.6	1,560.7	55.7	43.2	7.6	1.3
1960	236.8	1,445.1	44.3	33.7	8.5	1.5
1965	260.8	1,490.4	36.7	26.9	8.1	1.3
1970	283.2	1,348.6	27.0	20.8	7.9	1.5
1975	394.7	1,385.0	24.5	18.4	7.5	1.6
1980	711.9	1,738.5	25.5	18.6	10.6	2.2
1985	1,507.3	2,809.4	35.3	22.3	16.2	3.6
1990	2,411.6	3,864.7	40.8	22.6	16.2	3.4
1995	3,604.4	5,097.4	47.5	26.4	15.8	3.2
2000	3,409.8	4,445.6	33.6	19.0	13.0	2.3
2005	4,592.2	5,341.4	35.6	17.0	7.7	1.5
2006	4,829.0	5,440.0	35.3	16.4	8.9	1.7
2007	5,035.1	5,522.6	35.1	15.7	9.2	1.8
2008	5,803.1	6,236.3	39.3	17.0	8.7	1.8
2009	7,544.7	8,013.8	52.3	21.2	5.7	1.4
2010	9,018.9	9,497.1	61.0	24.6	6.6	1.5
2011	10,128.2	10,460.6	65.8	26.7	7.4	1.7
2012	11,281.1	11,450.9	70.1	28.5	6.6	1.4
2013	11,982.6	11,982.6	72.1	29.0	7.5	1.6
2014 estimate	12,902.7	12,712.4	74.4	N/A	7.4	1.6
2015 estimate	13,591.8	13,164.6	74.6	N/A	7.7	1.7
2016 estimate	14,256.6	13,557.4	74.3	N/A	8.8	1.9
2017 estimate	14,843.5	13,840.9	73.5	N/A	10.3	2.2
2018 estimate	15,370.5	14,051.0	72.4	N/A	11.9	2.5
2019 estimate	15,982.0	14,322.8	72.0	N/A	12.9	2.7

N/A = Not available.

[1] Debt in current dollars deflated by the GDP chain-type price index with fiscal year 2013 equal to 100.

[2] Total credit market debt owed by domestic nonfinancial sectors, modified in some years to be consistent with budget concepts for the measurement of Federal debt. Financial sectors are omitted to avoid double counting, since financial intermediaries borrow in the credit market primarily in order to finance lending in the credit market. Source: Federal Reserve Board flow of funds accounts. Projections are not available.

[3] Interest on debt held by the public is estimated as the interest on Treasury debt securities less the “interest received by trust funds” (subfunction 901 less subfunctions 902 and 903). The estimate of interest on debt held by the public does not include the comparatively small amount of interest paid on agency debt or the offsets for interest on Treasury debt received by other Government accounts (revolving funds and special funds).

began increasing rapidly in 2008. The deficit increased substantially in 2009 as the Government continued to take aggressive steps to restore the health of the Nation’s economy and financial markets. The deficit fell somewhat in 2010, increased only slightly in 2011, fell in 2012, and then decreased markedly in 2013. Under the proposals in the Budget, the deficit is projected to fall in 2014, both in nominal terms and as a share of the economy, and continue to fall as a percentage of GDP through 2018, then remain relatively stable for the remainder of the 10-year budget window. Debt held by the public as a percent of GDP is estimated to be 74.4 percent at the end of 2014 and 74.6 percent at the end of 2015, after which it declines gradually for the remainder of the 10-year budget window, falling to 69.0 percent of GDP in 2024. Debt net of financial assets as a percent of GDP is estimated to grow to 66.8 percent at the end of 2014 and then fall to 66.6 percent at the end of 2015 and continue to decline thereafter.

Debt Held by the Public and Gross Federal Debt

The Federal Government issues debt securities for two principal purposes. First, it borrows from the public to finance the Federal deficit.[2] Second, it issues debt to Federal Government accounts, primarily trust funds, which accumulate surpluses. By law, trust fund surpluses must generally be invested in Federal securities. The gross Federal debt is defined to consist of both the debt held by the public and the debt held by Government accounts. Nearly all the Federal debt has been issued by the Treasury and is sometimes called "public debt," but a small portion has been issued by other Government agencies and is called "agency debt."[3]

Borrowing from the public, whether by the Treasury or by some other Federal agency, is important because it represents the Federal demand on credit markets. Regardless of whether the proceeds are used for tangible or intangible investments or to finance current consumption, the Federal demand on credit markets has to be financed out of the saving of households and businesses, the State and local sector, or the rest of the world. Federal borrowing thereby competes with the borrowing of other sectors of the domestic or international economy for financial resources in the credit market. Borrowing from the public thus affects the size and composition of assets held by the private sector and the amount of saving imported from abroad. It also increases the amount of future resources required to pay interest to the public on Federal debt. Borrowing from the public is therefore an important concern of Federal fiscal policy. Borrowing from the public, however, is an incomplete measure of the Federal impact on credit markets. Different types of Federal activities can affect the credit markets in different ways. For example, under its direct loan programs, the Government uses borrowed funds to acquire financial assets that might otherwise require financing in the credit markets directly. (For more information on other ways in which Federal activities impact the credit market, see the discussion at the end of this chapter.)

Issuing debt securities to Government accounts performs an essential function in accounting for the operation of these funds. The balances of debt represent the cumulative surpluses of these funds due to the excess of their tax receipts, interest receipts, and other collections over their spending. The interest on the debt that is credited to these funds accounts for the fact that some earmarked taxes and user charges will be spent at a later time than when the funds receive the monies. The debt securities are assets of those funds but are a liability of the general fund to the funds that hold the securities, and are a mechanism for crediting interest to those funds on their recorded balances. These balances generally provide the fund with authority to draw upon the U.S. Treasury in later years to make future payments on its behalf to the public. Public policy may result in the Government's running surpluses and accumulating debt in trust funds and other Government accounts in anticipation of future spending.

However, issuing debt to Government accounts does not have any of the credit market effects of borrowing from the public. It is an internal transaction of the Government, made between two accounts that are both within the Government itself. Issuing debt to a Government account is not a current transaction of the Government with the public; it is not financed by private saving and does not compete with the private sector for available funds in the credit market. While such issuance provides the account with assets—a binding claim against the Treasury—those assets are fully offset by the increased liability of the Treasury to pay the claims, which will ultimately be covered by the collection of revenues or by borrowing. Similarly, the current interest earned by the Government account on its Treasury securities does not need to be financed by other resources.

Furthermore, the debt held by Government accounts does not represent the estimated amount of the account's obligations or responsibilities to make future payments to the public. For example, if the account records the transactions of a social insurance program, the debt that it holds does not necessarily represent the actuarial present value of estimated future benefits (or future benefits less taxes) for the current participants in the program; nor does it necessarily represent the actuarial present value of estimated future benefits (or future benefits less taxes) for the current participants plus the estimated future participants over some stated time period. The future transactions of Federal social insurance and employee retirement programs, which own 93 percent of the debt held by Government accounts, are important in their own right and need to be analyzed separately. This can be done through information published in the actuarial and financial reports for these programs.[4]

This Budget uses a variety of information sources to analyze the condition of Social Security and Medicare, the Government's two largest social insurance programs. Table 3-1 in Chapter 3, "Long-Term Budget Outlook," projects Social Security and Medicare outlays to the year 2085 relative to GDP. The excess of future Social Security and Medicare benefits relative to their dedicated income is very different in concept and much larger in size than the amount of Treasury securities that these programs hold.

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[2] For the purposes of the Budget, "debt held by the public" is defined as debt held by investors outside of the Federal Government, both domestic and foreign, including U.S. State and local governments and foreign governments. It also includes debt held by the Federal Reserve.

[3] The term "agency debt" is defined more narrowly in the budget than customarily in the securities market, where it includes not only the debt of the Federal agencies listed in Table 4–4, but also certain Government-guaranteed securities and the debt of the Government-Sponsored Enterprises listed in Table 20–7 in the supplemental materials to the "Credit and Insurance" chapter. (Table 20-7 is available on the Internet at: *www.budget.gov/budget/Analytical_Perspectives* and on the Budget CD-ROM.)

[4] Extensive actuarial analyses of the Social Security and Medicare programs are published in the annual reports of the boards of trustees of these funds. The actuarial estimates for Social Security, Medicare, and the major Federal employee retirement programs are summarized in the *Financial Report of the United States Government*, prepared annually by the Department of the Treasury in coordination with the Office of Management and Budget.

Table 4–2. FEDERAL GOVERNMENT FINANCING AND DEBT

(In billions of dollars)

	Actual 2013	Estimate										
		2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Financing:												
Unified budget deficit	679.5	648.8	563.6	531.1	457.8	413.3	502.7	512.2	503.6	530.3	481.7	433.7
Other transactions affecting borrowing from the public:												
Changes in financial assets and liabilities:[1]												
Change in Treasury operating cash balance	2.9	1.6	....	....	....	....	....	....	....	....	....	....
Net disbursements of credit financing accounts:												
Direct loan accounts	139.0	125.6	120.9	127.2	122.7	108.7	102.3	102.8	104.2	105.9	111.0	113.9
Guaranteed loan accounts	–0.5	25.9	9.9	7.8	7.7	6.3	7.7	6.8	3.9	1.2	–0.7	–1.6
Troubled Asset Relief Program equity purchase accounts	–7.0	–1.5	–4.1	–0.3	–0.2	–0.1	–0.2	–0.1	–*	–*	–*	–*
Subtotal, net disbursements	131.6	150.0	126.8	134.8	130.2	114.8	109.8	109.5	108.0	107.1	110.2	112.3
Net purchases of non-Federal securities by the National Railroad Retirement Investment Trust	1.3	–*	–1.1	–1.0	–1.0	–0.9	–0.8	–0.8	–0.8	–0.9	–0.6	–0.5
Net change in other financial assets and liabilities[2]	–113.5	119.9	....	....	....	....	....	....	....	....	....	....
Subtotal, changes in financial assets and liabilities	22.3	271.4	125.7	133.8	129.2	113.9	109.0	108.7	107.2	106.2	109.6	111.8
Seigniorage on coins	–0.4	–0.1	–0.1	–0.2	–0.2	–0.2	–0.2	–0.2	–0.2	–0.2	–0.2	–0.2
Total, other transactions affecting borrowing from the public	21.9	271.3	125.6	133.7	129.0	113.7	108.8	108.5	107.0	106.0	109.4	111.6
Total, requirement to borrow from the public (equals change in debt held by the public)	701.4	920.1	689.1	664.8	586.9	527.0	611.5	620.7	610.7	636.3	591.1	545.3
Changes in Debt Subject to Statutory Limitation:												
Change in debt held by the public	701.4	920.1	689.1	664.8	586.9	527.0	611.5	620.7	610.7	636.3	591.1	545.3
Change in debt held by Government accounts	–32.9	253.1	131.7	133.3	163.2	172.3	98.2	85.4	77.9	47.0	48.8	52.0
Less: change in debt not subject to limit and other adjustments	3.9	–8.3	0.9	2.4	2.5	2.1	2.5	2.6	2.1	2.3	2.9	2.7
Total, change in debt subject to statutory limitation	672.4	1,164.9	821.8	800.5	752.6	701.5	712.2	708.7	690.7	685.6	642.8	600.0
Debt Subject to Statutory Limitation, End of Year:												
Debt issued by Treasury	16,691.7	17,864.0	18,684.5	19,483.1	20,234.1	20,934.4	21,645.1	22,352.3	23,041.7	23,726.1	24,367.7	24,966.7
Less: Treasury debt not subject to limitation (–)[3]	–6.7	–14.1	–12.8	–10.9	–9.3	–8.2	–6.6	–5.1	–3.9	–2.7	–1.5	–0.5
Agency debt subject to limitation	*	*	*	*	*	*	*	*	*	*	*	*
Adjustment for discount and premium[4]	14.4	14.4	14.4	14.4	14.4	14.4	14.4	14.4	14.4	14.4	14.4	14.4
Total, debt subject to statutory limitation[5]	16,699.4	17,864.3	18,686.0	19,486.6	20,239.2	20,940.6	21,652.9	22,361.5	23,052.2	23,737.8	24,380.6	24,980.6
Debt Outstanding, End of Year:												
Gross Federal debt:[6]												
Debt issued by Treasury	16,691.7	17,864.0	18,684.5	19,483.1	20,234.1	20,934.4	21,645.1	22,352.3	23,041.7	23,726.1	24,367.7	24,966.7
Debt issued by other agencies	27.7	28.6	29.0	28.5	27.6	26.6	25.6	24.6	23.7	22.6	21.0	19.2
Total, gross Federal debt	16,719.4	17,892.6	18,713.5	19,511.6	20,261.7	20,961.1	21,670.7	22,376.8	23,065.4	23,748.7	24,388.7	24,985.9
Held by:												
Debt held by Government accounts	4,736.9	4,990.0	5,121.7	5,255.0	5,418.3	5,590.6	5,688.8	5,774.2	5,852.1	5,899.1	5,948.0	5,999.9
Debt held by the public[7]	11,982.6	12,902.7	13,591.8	14,256.6	14,843.5	15,370.5	15,982.0	16,602.6	17,213.3	17,849.6	18,440.7	18,986.0

*$50 million or less.

[1] A decrease in the Treasury operating cash balance (which is an asset) is a means of financing a deficit and therefore has a negative sign. An increase in checks outstanding (which is a liability) is also a means of financing a deficit and therefore also has a negative sign.

[2] Includes checks outstanding, accrued interest payable on Treasury debt, uninvested deposit fund balances, allocations of special drawing rights, and other liability accounts; and, as an offset, cash and monetary assets (other than the Treasury operating cash balance), other asset accounts, and profit on sale of gold.

[3] Consists primarily of debt issued by the Federal Financing Bank and Treasury securities held by the Federal Financing Bank.

[4] Consists mainly of unamortized discount (less premium) on public issues of Treasury notes and bonds (other than zero-coupon bonds) and unrealized discount on Government account series securities.

[5] Legislation enacted February 15, 2014, (P.L. 113–83) temporarily suspends the debt limit through March 15, 2015.

[6] Treasury securities held by the public and zero-coupon bonds held by Government accounts are almost all measured at sales price plus amortized discount or less amortized premium. Agency debt securities are almost all measured at face value. Treasury securities in the Government account series are otherwise measured at face value less unrealized discount (if any).

[7] At the end of 2013, the Federal Reserve Banks held $2,072.3 billion of Federal securities and the rest of the public held $9,910.3 billion. Debt held by the Federal Reserve Banks is not estimated for future years.

For all these reasons, debt held by the public and debt net of financial assets are both better gauges of the effect of the budget on the credit markets than gross Federal debt.

Government Deficits or Surpluses and the Change in Debt

Table 4–2 summarizes Federal borrowing and debt from 2013 through 2024.[5] In 2013 the Government borrowed $701 billion, increasing the debt held by the public from $11,281 billion at the end of 2012 to $11,983 billion at the end of 2013. The debt held by Government accounts decreased $33 billion, and gross Federal debt increased by $669 billion to $16,719 billion.

Debt held by the public.—The Federal Government primarily finances deficits by borrowing from the public, and it primarily uses surpluses to repay debt held by the public.[6] Table 4–2 shows the relationship between the Federal deficit or surplus and the change in debt held by the public. The borrowing or debt repayment depends on the Government's expenditure programs and tax laws, on the economic conditions that influence tax receipts and outlays, and on debt management policy. The sensitivity of the budget to economic conditions is analyzed in Chapter 2, "Economic Assumptions and Interactions with the Budget," in this volume.

The total or unified budget deficit consists of two parts: the on-budget deficit; and the surplus of the off-budget Federal entities, which have been excluded from the budget by law. Under present law, the off-budget Federal entities are the Social Security trust funds (Old-Age and Survivors Insurance and Disability Insurance) and the Postal Service Fund.[7] The on-budget and off-budget surpluses or deficits are added together to determine the Government's financing needs.

Over the long run, it is a good approximation to say that "the deficit is financed by borrowing from the public" or "the surplus is used to repay debt held by the public." However, the Government's need to borrow in any given year has always depended on several other factors besides the unified budget surplus or deficit, such as the change in the Treasury operating cash balance. These other factors—"other transactions affecting borrowing from the public"—can either increase or decrease the Government's need to borrow and can vary considerably in size from year to year. The other transactions affecting borrowing from the public are presented in Table 4–2 (an increase in the need to borrow is represented by a positive sign, like the deficit).

In 2013 the deficit was $680 billion while these other factors increased the need to borrow by $22 billion, or 3 percent of total borrowing from the public. As a result, the Government borrowed $701 billion from the public. The other factors are estimated to increase borrowing by $271 billion (29 percent of total borrowing from the public) in 2014, and $126 billion (18 percent) in 2015. In 2016–2024, these other factors are expected to increase borrowing by annual amounts ranging from $106 billion to $134 billion.

Three specific factors presented in Table 4–2 have historically been especially important.

Change in Treasury operating cash balance.—The cash balance increased by $27 billion, to $85 billion, in 2012 and increased by $3 billion, to $88 billion, in 2013. The operating cash balance is projected to increase by $2 billion, to $90 billion at the end of 2014. Changes in the operating cash balance, while occasionally large, are inherently limited over time. Decreases in cash—a means of financing the Government—are limited by the amount of past accumulations, which themselves required financing when they were built up. Increases are limited because it is generally more efficient to repay debt.

Net financing disbursements of the direct loan and guaranteed loan financing accounts.—Under the Federal Credit Reform Act of 1990 (FCRA), the budgetary program account for each credit program records the estimated subsidy costs–the present value of estimated net losses–at the time when the direct or guaranteed loans are disbursed. The individual cash flows to and from the public associated with the loans or guarantees, such as the disbursement and repayment of loans, the default payments on loan guarantees, the collection of interest and fees, and so forth, are recorded in the credit program's non-budgetary financing account. Although the non-budgetary financing account's cash flows to and from the public are not included in the deficit (except for their impact on subsidy costs), they affect Treasury's net borrowing requirements.[8]

In addition to the transactions with the public, the financing accounts include several types of intragovernmental transactions. In particular, they receive payment from the credit program accounts for the subsidy costs of new direct loans and loan guarantees and for any upward reestimate of the costs of outstanding direct and guaranteed loans. The financing accounts also pay any downward reestimate of costs to budgetary receipt accounts. The total net collections and gross disbursements of the financing accounts, consisting of transactions with both the public and the budgetary accounts, are called "net financing disbursements." They occur in the same way as the "outlays" of a budgetary account, even though they do not represent budgetary costs, and therefore affect the requirement for borrowing from the public in the same way as the deficit.

The intragovernmental transactions of the credit program, financing, and downward reestimate receipt accounts do not affect Federal borrowing from the public.

[5] For projections of the debt beyond 2024, see Chapter 3, "Long Term Budget Outlook."

[6] Treasury debt held by the public is measured as the sales price plus the amortized discount (or less the amortized premium). At the time of sale, the book value equals the sales price. Subsequently, it equals the sales price plus the amount of the discount that has been amortized up to that time. In equivalent terms, the book value of the debt equals the principal amount due at maturity (par or face value) less the unamortized discount. (For a security sold at a premium, the definition is symmetrical.) For inflation-indexed notes and bonds, the book value includes a periodic adjustment for inflation. Agency debt is generally recorded at par.

[7] For further explanation of the off-budget Federal entities, see Chapter 10, "Coverage of the Budget."

[8] The FCRA (sec. 505(b)) requires that the financing accounts be non-budgetary. They are non-budgetary in concept because they do not measure cost. For additional discussion of credit programs, see Chapter 20, "Credit and Insurance," and Chapter 9, "Budget Concepts."

Although the deficit changes because of the budgetary account's outlay to, or receipt from, a financing account, the net financing disbursement changes in an equal amount with the opposite sign, so the effects are cancelled out. On the other hand, financing account disbursements to the public increase the requirement for borrowing from the public in the same way as an increase in budget outlays that are disbursed to the public in cash. Likewise, receipts from the public collected by the financing account can be used to finance the payment of the Government's obligations, and therefore they reduce the requirement for Federal borrowing from the public in the same way as an increase in budgetary receipts.

Borrowing due to credit financing accounts was $132 billion in 2013. In 2014 credit financing accounts are projected to increase borrowing by $150 billion. After 2014, the credit financing accounts are expected to increase borrowing by amounts ranging from $107 billion to $135 billion over the next 10 years.

In some years, large net upward or downward reestimates in the cost of outstanding direct and guaranteed loans may cause large swings in the net financing disbursements. There was a net upward reestimate of $1.1 billion in 2013 and a net upward reestimate of $0.4 billion in 2014.

Net purchases of non-Federal securities by the National Railroad Retirement Investment Trust (NRRIT).—This trust fund, which was established by the Railroad Retirement and Survivors' Improvement Act of 2001, invests its assets primarily in private stocks and bonds. The Act required special treatment of the purchase or sale of non-Federal assets by the NRRIT trust fund, treating such purchases as a means of financing rather than outlays. Therefore, the increased need to borrow from the public to finance NRRIT's purchases of non-Federal assets is part of the "other transactions affecting borrowing from the public" rather than included as an increase in the deficit. While net purchases and redemptions affect borrowing from the public, unrealized gains and losses on NRRIT's portfolio are included in both the other factors and, with the opposite sign, in NRRIT's net outlays in the deficit, for no net impact on borrowing from the public. In 2013, net increases, including purchases and gains, were $1 billion. A small net decrease is projected for 2014 and net decreases of roughly $1 billion annually are projected for 2015 and subsequent years.[9]

Net change in other financial assets and liabilities.—In addition to the three factors discussed above, in 2013, the net change in other financial assets and liabilities was also particularly significant. Generally, the amounts in this category are relatively small. For example, this category decreased the need to borrow by $1 billion in 2012 and increased the need to borrow by $5 billion in 2011. However, in 2013, this "other" category reduced the need to borrow by a net $114 billion. Of the net $114 billion, $120 billion—offset slightly by other factors—was due to the suspension of the daily reinvestment of the Thrift Savings Plan (TSP) Government Securities Investment Fund (G-Fund).[10] The Department of the Treasury is authorized to suspend the issuance of obligations to the TSP G-Fund as an "extraordinary measure" if issuances could not be made without causing the public debt of the United States to exceed the debt limit. The suspension of the daily reinvestment of the TSP G-Fund resulted in the amounts being moved from debt held by the public to deposit fund balances, an "other" financial liability. Once Treasury is able to do so without exceeding the debt limit, Treasury is required to fully reinvest the TSP G-Fund and restore any foregone interest. Accordingly, the TSP G-Fund was fully reinvested in October 2013. Table 4–2 reflects the $120 billion reinvestment, which returns the amount from deposit fund balances to debt held by the public. The debt ceiling and the use of the TSP G-Fund are discussed in further detail below.

Debt held by Government accounts.—The amount of Federal debt issued to Government accounts depends largely on the surpluses of the trust funds, both on-budget and off-budget, which owned 91 percent of the total Federal debt held by Government accounts at the end of 2013. Investment may differ from the surplus due to changes in the amount of cash assets not currently invested. In 2013, the total trust fund surplus was $86 billion, and trust fund investment in Federal securities decreased by $42 billion. This $129 billion difference was primarily due to the Civil Service Retirement and Disability Fund (CSRDF), which had a surplus of $16 billion but disinvested $107 billion, as a result of the extraordinary measures that the Treasury Department is authorized to take with the fund when the Government is at the debt ceiling. For further details on such measures, see the discussion below. The remainder of debt issued to Government accounts is owned by a number of special funds and revolving funds. The debt held in major accounts and the annual investments are shown in Table 4–5.

Debt Held by the Public Net of Financial Assets and Liabilities

While debt held by the public is a key measure for examining the role and impact of the Federal Government in the U.S. and international credit markets and for other purposes, it provides incomplete information on the Government's financial condition. The U.S. Government holds significant financial assets, which must be offset against debt held by the public and other financial liabilities to achieve a more complete understanding of the Government's financial condition. The acquisition of those financial assets represents a transaction with the credit markets, broadening those markets in a way that is analogous to the demand on credit markets that borrowing entails. For this reason, debt held by the public is also an incomplete measure of the impact of the Federal Government in the United States and international credit markets.

One transaction that can increase both borrowing and assets is an increase to the Treasury operating cash balance. When the Government borrows to increase

[9] The budget treatment of this fund is further discussed in Chapter 9, "Budget Concepts."

[10] The TSP is a defined contribution pension plan for Federal employees. The G-Fund is one of several components of the TSP.

Table 4–3. DEBT HELD BY THE PUBLIC NET OF FINANCIAL ASSETS AND LIABILITIES
(Dollar amounts in billions)

	Actual	Estimate										
	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Debt Held by the Public:												
Debt held by the public	11,982.6	12,902.7	13,591.8	14,256.6	14,843.5	15,370.5	15,982.0	16,602.6	17,213.3	17,849.6	18,440.7	18,986.0
As a percent of GDP	72.1%	74.4%	74.6%	74.3%	73.5%	72.4%	72.0%	71.6%	71.1%	70.6%	69.9%	69.0%
Financial Assets Net of Liabilities:												
Treasury operating cash balance	88.4	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0
Credit financing account balances:												
Direct loan accounts	943.8	1,069.4	1,190.3	1,317.5	1,440.3	1,549.0	1,651.3	1,754.1	1,858.3	1,964.2	2,075.1	2,189.0
Guaranteed loan accounts	–10.4	15.5	25.5	33.3	40.9	47.2	54.8	61.6	65.5	66.7	66.0	64.4
Troubled Asset Relief Program equity purchase accounts	6.6	5.1	1.0	0.7	0.5	0.4	0.2	0.2	0.1	0.1	0.1	0.1
Subtotal, credit financing account balances	940.0	1,090.0	1,216.8	1,351.5	1,481.7	1,596.6	1,706.3	1,815.8	1,923.9	2,031.0	2,141.2	2,253.5
Government-sponsored enterprise preferred stock	140.2	140.2	140.2	140.2	140.2	140.2	140.2	140.2	140.2	140.2	140.2	140.2
Non-Federal securities held by NRRIT	24.2	24.1	23.1	22.1	21.1	20.2	19.4	18.6	17.7	16.8	16.2	15.7
Other assets net of liabilities	–136.6	–16.7	–16.7	–16.7	–16.7	–16.7	–16.7	–16.7	–16.7	–16.7	–16.7	–16.7
Total, financial assets net of liabilities	1,056.2	1,327.6	1,453.3	1,587.1	1,716.3	1,830.2	1,939.2	2,047.9	2,155.1	2,261.3	2,370.9	2,482.7
Debt Held by the Public Net of Financial Assets and Liabilities:												
Debt held by the public net of financial assets	10,926.4	11,575.1	12,138.5	12,669.4	13,127.1	13,540.2	14,042.7	14,554.7	15,058.2	15,588.4	16,069.8	16,503.4
As a percent of GDP	65.7%	66.8%	66.6%	66.1%	65.0%	63.8%	63.3%	62.7%	62.2%	61.7%	60.9%	59.9%

the Treasury operating cash balance, that cash balance also represents an asset that is available to the Federal Government. Looking at both sides of this transaction—the borrowing to obtain the cash and the asset of the cash holdings—provides much more complete information about the Government's financial condition than looking at only the borrowing from the public. Another example of a transaction that simultaneously increases borrowing from the public and Federal assets is Government borrowing to issue direct loans to the public. When the direct loan is made, the Government is also acquiring an asset in the form of future payments of principal and interest, net of the Government's expected losses on the loan. Similarly, when NRRIT increases its holdings of non-Federal securities, the borrowing to purchase those securities is offset by the value of the asset holdings.

The acquisition or disposition of Federal financial assets very largely explains the difference between the deficit for a particular year and that year's increase in debt held by the public. Debt net of financial assets is a measure that is conceptually closer to the measurement of Federal deficits or surpluses; cumulative deficits and surpluses over time more closely equal the debt net of financial assets than they do the debt held by the public.

Table 4–3 presents debt held by the public net of the Government's financial assets and liabilities, or "net debt." Treasury debt is presented in the Budget at book value, with no adjustments for the change in economic value that results from fluctuations in interest rates. The balances of credit financing accounts are based on projections of future cash flows. For direct loan financing accounts, the balance generally represents the net present value of anticipated future inflows such as principal and interest payments from borrowers. For guaranteed loan financing accounts, the balance generally represents the net present value of anticipated future outflows, such as default claim payments net of recoveries and other collections, such as program fees. NRRIT's holdings of non-Federal securities are marked to market on a monthly basis. Government-Sponsored Enterprise (GSE) preferred stock is measured at market value.

Net financial assets increased by $56 billion, to $1,056 billion, in 2013. At the end of 2013, debt held by the public was $11,983 billion, or 72.1 percent of GDP. The Government held $1,056 billion in net financial assets, including a cash balance of $88 billion, net credit financing account balances of $940 billion, and other assets and liabilities that aggregated to a net asset of $28 billion. Therefore, debt net of financial assets was $10,926 billion, or 65.7 percent of GDP. As shown in Table 4–3, the value of the Government's net financial assets is projected to increase to $1,328 billion in 2014, due to increases in the net balances of credit financing accounts and other factors. While debt held by the public is expected to increase from 72.1 percent to 74.4 percent of GDP during 2014, net debt is expected to increase from 65.7 percent to 66.8 percent of GDP.

Debt securities and other financial assets and liabilities do not encompass all the assets and liabilities of the Federal Government. For example, accounts payable occur in the normal course of buying goods and services; Social Security benefits are due and payable as of the end of the month but, according to statute, are paid during the next month; and Federal employee salaries are paid after they have been earned. Like debt securities sold in the credit market, these liabilities have their own distinctive effects on the economy. The Federal Government also has significant holdings of non-financial assets, such as land, mineral deposits, buildings, and equipment. A unique and important asset is the Government's sovereign power to tax. The different types of assets and liabilities are reported annually in the financial statements of Federal agencies and in the *Financial Report of the United States Government*, prepared by the Treasury Department in coordination with the Office of Management and Budget (OMB).

Treasury Debt

Nearly all Federal debt is issued by the Department of the Treasury. Treasury meets most of the Federal Government's financing needs by issuing marketable securities to the public. These financing needs include both the change in debt held by the public and the refinancing—or rollover—of any outstanding debt that matures during the year. Treasury marketable debt is sold at public auctions on a regular schedule and can be bought and sold on the secondary market. Treasury also sells to the public a relatively small amount of nonmarketable securities, such as savings bonds and State and Local Government Series securities (SLGS).[11] Treasury nonmarketable debt cannot be bought or sold on the secondary market.

Treasury issues marketable securities in a wide range of maturities, and issues both nominal (non-inflation-indexed) and inflation-indexed securities. Treasury's marketable securities include:

Treasury Bills—Treasury bills have maturities of one year or less from their issue date. In addition to the regular auction calendar of bill issuance, Treasury issues cash management bills on an as-needed basis for various reasons such as to offset the seasonal patterns of the Government's receipts and outlays.

Treasury Notes—Treasury notes have maturities of more than one year and up to 10 years.

Treasury Bonds—Treasury bonds have maturities of more than 10 years. The longest-maturity securities issued by Treasury are 30-year bonds.

Treasury Inflation-Protected Securities (TIPS)—Treasury inflation-protected—or inflation-indexed—securities are coupon issues for which the par value of the security rises with inflation. The principal value is adjusted daily to reflect inflation as measured by changes in the Consumer Price Index (CPI-U-NSA, with a two-month lag). Although the principal value may be adjusted downward if inflation is negative, at maturity, the securities will be redeemed at the greater of their inflation-adjusted principal or par amount at original issue.

Historically, the average maturity of outstanding debt issued by Treasury has been about five years. The average maturity of outstanding debt was 67 months at the end of 2013.

Traditionally, Treasury has issued securities with a fixed interest rate. In 2012, Treasury began to develop a floating rate securities program to complement its existing suite of securities and to support Treasury's broader debt management objectives. Floating rate securities have a fixed par value but bear interest rates that fluctuate based on movements in a specified benchmark market interest rate. Treasury's floating rate notes are benchmarked to the Treasury 13-week bill. Treasury held the first floating rate securities auction in January 2014. Currently, Treasury is issuing floating rate securities with a maturity of two years.

In addition to quarterly announcements about the overall auction calendar, Treasury publicly announces in advance the auction of each security. Individuals can participate directly in Treasury auctions or can purchase securities through brokers, dealers, and other financial institutions. Treasury accepts two types of auction bids—competitive and noncompetitive. In a competitive bid, the bidder specifies the yield. A significant portion of competitive bids are submitted by primary dealers, which are banks and securities brokerages that have been designated to trade in Treasury securities with the Federal Reserve System. In a noncompetitive bid, the bidder agrees to accept the yield determined by the auction.[12] At the close of the auction, Treasury accepts all eligible noncompetitive bids and then accepts competitive bids in ascending order beginning with the lowest yield bid until the offering amount is reached. All winning bidders receive the highest accepted yield bid.

Treasury marketable securities are highly liquid and actively traded on the secondary market. The liquidity of Treasury securities is reflected in the ratio of bids received to bids accepted in Treasury auctions; the demand for the securities is substantially greater than the level of issuance. Because they are backed by the full faith and credit of the United States Government, Treasury marketable securities are considered to be "risk-free." Therefore, the Treasury yield curve is commonly used as a benchmark for a wide variety of purposes in the financial markets.

Whereas Treasury issuance of marketable debt is based on the Government's financing needs, Treasury's issuance of nonmarketable debt is based on the public's demand for the specific types of investments. Increases in outstanding balances of nonmarketable debt reduce the need for marketable borrowing. In 2013, there was net disinvestment in nonmarketables, necessitating additional marketable borrowing to finance the redemption of nonmarketable debt.[13]

Agency Debt

A few Federal agencies, shown in Table 4–4, sell or have sold debt securities to the public and, at times, to other Government accounts. Currently, new debt is issued only by the Tennessee Valley Authority (TVA) and the Federal Housing Administration (FHA); the remain-

[11] Under the SLGS program, the Treasury offers special low-yield securities to State and local governments and other entities for temporary investment of proceeds of tax-exempt bonds.

[12] Noncompetitive bids cannot exceed $5 million.

[13] Detail on the marketable and nonmarketable securities issued by Treasury is found in the *Monthly Statement of the Public Debt*, published on a monthly basis by the Department of the Treasury.

Table 4–4. AGENCY DEBT
(In millions of dollars)

	2013 Actual		2014 Estimate		2015 Estimate	
	Borrowing/ Repayment(–)	Debt, End-of-Year	Borrowing/ Repayment(–)	Debt, End-of-Year	Borrowing/ Repayment(–)	Debt, End-of-Year
Borrowing from the public:						
Housing and Urban Development:						
Federal Housing Administration	....	19	*	19	....	19
Architect of the Capitol	–7	121	–7	114	–7	107
National Archives	–17	134	–18	116	–20	97
Tennessee Valley Authority:						
Bonds and notes	718	24,816	1,086	25,902	596	26,498
Lease/leaseback obligations	–56	2,142	–88	2,054	–102	1,952
Prepayment obligations	–102	510	–100	410	–100	310
Total, borrowing from the public	537	27,741	874	28,615	368	28,982
Borrowing from other funds:						
Tennessee Valley Authority[1]	1	5	....	5	....	5
Total, borrowing from other funds	1	5	....	5	....	5
Total, agency borrowing	537	27,746	874	28,620	368	28,988
Memorandum:						
Tennessee Valley Authority bonds and notes, total	718	24,821	1,086	25,907	596	26,504

* $500,000 or less.
[1]Represents open market purchases by the National Railroad Retirement Investment Trust.

ing agencies are repaying past borrowing. Agency debt increased from $27.2 billion at the end of 2012 to $27.7 billion at the end of 2013, due to increases in debt issued by TVA, slightly offset by decreases in debt issued by other agencies. Agency debt is less than one-quarter of one percent of Federal debt held by the public. As a result of new borrowing by TVA, agency debt is estimated to increase by $0.9 billion in 2014 and by $0.4 billion in 2015.

The predominant agency borrower is TVA, which had borrowings of $27.5 billion from the public as of the end of 2013, or 99 percent of the total debt of all agencies. TVA issues debt primarily to finance capital projects.

TVA has traditionally financed its capital construction by selling bonds and notes to the public. Since 2000, it has also employed two types of alternative financing methods, lease/leaseback obligations and prepayment obligations. Under the lease/leaseback obligations method, TVA signs contracts to lease some facilities and equipment to private investors and simultaneously leases them back. It receives a lump sum for leasing out its assets, and then leases them back at fixed annual payments for a set number of years. TVA retains substantially all of the economic benefits and risks related to ownership of the assets.[14] Under the prepayment obligations method, TVA's power distributors may prepay a portion of the price of the power they plan to purchase in the future. In return, they obtain a discount on a specific quantity of the future power they buy from TVA. The quantity varies, depending on TVA's estimated cost of borrowing.

The OMB determined that each of these alternative financing methods is a means of financing the acquisition of assets owned and used by the Government, or of refinancing debt previously incurred to finance such assets. They are equivalent in concept to other forms of borrowing from the public, although under different terms and conditions. The budget therefore records the upfront cash proceeds from these methods as borrowing from the public, not offsetting collections.[15] The budget presentation is consistent with the reporting of these obligations as liabilities on TVA's balance sheet under generally accepted accounting principles. Table 4–4 presents these alternative financing methods separately from TVA bonds and notes to distinguish between the types of borrowing. Obligations for lease/leasebacks were $2.1 billion at the end of 2013 and are estimated to be $2.1 billion at the end of 2014 and $2.0 billion at the end of 2015. Obligations for prepayments were $0.5 billion at the end of 2013 and are estimated to be $0.4 billion at the end of 2014 and $0.3 billion at the end of 2015.

Although the FHA generally makes direct disbursements to the public for default claims on FHA-insured mortgages, it may also pay claims by issuing deben-

[14] This arrangement is at least as governmental as a "lease-purchase without substantial private risk." For further detail on the current budgetary treatment of lease-purchase without substantial private risk, see OMB Circular No. A–11, Appendix B.

[15] This budgetary treatment differs from the treatment in the *Monthly Treasury Statement of Receipts and Outlays of the United States Government (Monthly Treasury Statement)* Table 6 Schedule C, and the *Combined Statement of Receipts, Outlays, and Balances of the United States Government* Schedule 3, both published by the Department of the Treasury. These two schedules, which present debt issued by agencies other than Treasury, exclude the TVA alternative financing arrangements. This difference in treatment is one factor causing minor differences between debt figures reported in the Budget and debt figures reported by Treasury. The other factors are adjustments for the timing of the reporting of Federal debt held by NRRIT and treatment of the Federal debt held by the Securities Investor Protection Corporation.

tures. Issuing debentures to pay the Government's bills is equivalent to selling securities to the public and then paying the bills by disbursing the cash borrowed, so the transaction is recorded as being simultaneously an outlay and borrowing. The debentures are therefore classified as agency debt.

A number of years ago, the Federal Government guaranteed the debt used to finance the construction of buildings for the National Archives and the Architect of the Capitol, and subsequently exercised full control over the design, construction, and operation of the buildings. These arrangements are equivalent to direct Federal construction financed by Federal borrowing. The construction expenditures and interest were therefore classified as Federal outlays, and the borrowing was classified as Federal agency borrowing from the public.

A number of Federal agencies borrow from the Bureau of the Public Debt (BPD) or the Federal Financing Bank (FFB), both within the Department of the Treasury. Agency borrowing from the FFB or the BPD is not included in gross Federal debt. It would be double counting to add together (a) the agency borrowing from the BPD or FFB and (b) the Treasury borrowing from the public that is needed to provide the BPD or FFB with the funds to lend to the agencies.

Debt Held by Government Accounts

Trust funds, and some special funds and public enterprise revolving funds, accumulate cash in excess of current needs in order to meet future obligations. These cash surpluses are generally invested in Treasury debt.

Total investment by trust funds and other Government accounts decreased by $33 billion in 2013. Investment by Government accounts is estimated to be $253 billion in 2014 and $132 billion in 2015, as shown in Table 4–5. The holdings of Federal securities by Government accounts are estimated to increase to $5,122 billion by the end of 2015, or 27 percent of the gross Federal debt. The percentage is estimated to decrease gradually over the next 10 years.

The Government account holdings of Federal securities are concentrated among a few funds: the Social Security Old-Age and Survivors Insurance (OASI) and Disability Insurance (DI) trust funds; the Medicare Hospital Insurance (HI) and Supplementary Medical Insurance (SMI) trust funds; and four Federal employee retirement funds. These Federal employee retirement funds include the Military Retirement Fund and the Civil Service Retirement and Disability Fund, which are trust funds, and the uniformed services Medicare-Eligible Retiree Health Care Fund (MERHCF) and Postal Service Retiree Health Benefits Fund (PSRHBF), which are special funds. At the end of 2015, these Social Security, Medicare, and Federal employee retirement funds are estimated to own 92 percent of the total debt held by Government accounts. During 2013–2015, the Military Retirement Fund has a large surplus and is estimated to invest a total of $160 billion, 45 percent of total net investment by Government accounts, and the Social Security OASI fund is projected to invest $151 billion, 43 percent of the net total. CSRDF is projected to invest $52 billion, 15 percent of the net total. Some Government accounts reduce their investments in Federal securities during 2013–2015. During these years, the Social Security DI fund disinvests $99 billion, or 28 percent of the total net investment and the Medicare HI trust fund disinvests $42 billion, or 12 percent of the total.

Technical note on measurement.—The Treasury securities held by Government accounts consist almost entirely of the Government account series. Most were issued at par value (face value), and the securities issued at a discount or premium were traditionally recorded at par in the OMB and Treasury reports on Federal debt. However, there are two kinds of exceptions.

First, Treasury issues zero-coupon bonds to a very few Government accounts. Because the purchase price is a small fraction of par value and the amounts are large, the holdings are recorded in Table 4–5 at par value less unamortized discount. The only two Government accounts that held zero-coupon bonds during the period of this table are the Nuclear Waste Disposal Fund in the Department of Energy and the Pension Benefit Guaranty Corporation (PBGC). The total unamortized discount on zero-coupon bonds was $20.4 billion at the end of 2013.

Second, Treasury subtracts the unrealized discount on other Government account series securities in calculating "net Federal securities held as investments of Government accounts." Unlike the discount recorded for zero-coupon bonds and debt held by the public, the unrealized discount is the discount at the time of issue and is not amortized over the term of the security. In Table 4–5 it is shown as a separate item at the end of the table and not distributed by account. The amount was $1.9 billion at the end of 2013.

Debt Held by the Federal Reserve

The Federal Reserve acquires marketable Treasury securities as part of its exercise of monetary policy. For purposes of the Budget and reporting by the Department of the Treasury, the transactions of the Federal Reserve are considered to be non-budgetary, and accordingly the Federal Reserve's holdings of Treasury securities are included as part of debt held by the public.[16] Federal Reserve holdings were $2,072 billion (17 percent of debt held by the public) at the end of 2013, up from $1,645 billion (15 percent of debt held by the public) at the end of 2012. Over the last 10 years, the Federal Reserve holdings have averaged 14 percent of debt held by the public. The historical holdings of the Federal Reserve are presented in Table 7.1 in the *Historical Tables* volume of the Budget. The Budget does not project Federal Reserve holdings for future years.

Limitations on Federal Debt

Definition of debt subject to limit.—Statutory limitations have usually been placed on Federal debt. Until World War I, the Congress ordinarily authorized a specific amount of debt for each separate issue. Beginning with

[16] For further detail on the monetary policy activities of the Federal Reserve and the treatment of the Federal Reserve in the Budget, see Chapter 10, "Coverage of the Budget."

Table 4–5. DEBT HELD BY GOVERNMENT ACCOUNTS[1]

(In millions of dollars)

Description	Investment or Disinvestment (–)			Holdings, End of 2015 Estimate
	2013 Actual	2014 Estimate	2015 Estimate	
Investment in Treasury debt:				
Energy:				
Nuclear waste disposal fund[1]	2,179	628	628	31,655
Uranium enrichment decontamination fund	–348	–487	160	3,346
Health and Human Services:				
Federal hospital insurance trust fund	–22,282	–17,016	–3,174	185,820
Federal supplementary medical insurance trust fund	–1,939	5,254	99	72,738
Vaccine injury compensation fund	50	80	91	3,415
Child enrollment contingency fund	3	–2,098	....	....
Homeland Security:				
Aquatic resources trust fund	–76	36	–11	1,891
Oil spill liability trust fund	659	618	723	4,554
Housing and Urban Development:				
Federal Housing Administration mutual mortgage fund	–2,774	7,877	13,167	21,044
Guarantees of mortgage-backed securities	–306	6,485	689	8,986
Interior:				
Abandoned mine reclamation fund	–1	20	–69	2,702
Federal aid in wildlife restoration fund	686	108	30	1,559
Environmental improvement and restoration fund	58	133	1,330	2,790
Justice: Assets forfeiture fund	583	–309	–2,471	1,896
Labor:				
Unemployment trust fund	8,805	9,522	4,000	43,000
Pension Benefit Guaranty Corporation[1]	1,636	–141	611	17,962
State: Foreign service retirement and disability trust fund	471	504	504	18,372
Transportation:				
Airport and airway trust fund	1,383	261	–1,259	10,810
Transportation trust fund	–8,013	–1,957	14,628	14,628
Aviation insurance revolving fund	119	57	153	2,147
Treasury:				
Exchange stabilization fund	–11	–3	4	22,670
Treasury forfeiture fund	1,193	–867	....	1,957
Comptroller of the Currency assessment fund	–66	–*	....	1,293
Veterans Affairs:				
National service life insurance trust fund	–656	–840	–721	4,695
Veterans special life insurance fund	–39	–75	–88	1,751
Corps of Engineers: Harbor maintenance trust fund	820	802	866	9,374
Other Defense-Civil:				
Military retirement trust fund	44,888	55,927	58,896	536,150
Medicare-eligible retiree health care fund	12,552	10,447	9,863	208,974
Education benefits fund	–112	–106	–117	1,556
Environmental Protection Agency:				
Leaking underground storage tank trust fund	64	64	–57	1,330
Hazardous substance trust fund	–63	–63	1	3,125
International Assistance Programs: Overseas Private Investment Corporation	150	59	29	5,480
Office of Personnel Management:				
Civil service retirement and disability trust fund	–107,099	143,248	15,975	878,679
Postal Service retiree health benefits fund	–3,023	11,771	7,166	61,261
Employees life insurance fund	701	*	1,170	43,121
Employees health benefits fund	2,168	697	1,164	25,290
Social Security Administration:				
Federal old-age and survivors insurance trust fund[2]	68,901	49,860	31,998	2,737,457
Federal disability insurance trust fund[2]	–31,554	–33,079	–34,109	33,603

Table 4–5. DEBT HELD BY GOVERNMENT ACCOUNTS[1]—Continued
(In millions of dollars)

Description	Investment or Disinvestment (–)			Holdings, End of 2015 Estimate
	2013 Actual	2014 Estimate	2015 Estimate	
District of Columbia: Federal pension fund	–434	–25	–10	3,174
Farm Credit System Insurance Corporation:				
Farm Credit System Insurance fund	107	260	176	3,637
Federal Communications Commission:				
Universal service fund	609	–*	....	7,150
Federal Deposit Insurance Corporation:				
Deposit insurance fund	366	4,240	10,356	51,460
Senior unsecured debt guarantee fund	–1,104	....	....	....
FSLIC resolution fund	–2,599	4	–399	430
National Credit Union Administration:				
Share insurance fund	346	461	399	11,503
Central liquidity facility	–1,815	70	8	205
Postal Service funds[2]	269	*	....	2,860
Railroad Retirement Board trust funds	54	–20	–33	2,337
Securities Investor Protection Corporation[3]	315	95	128	2,138
United States Enrichment Corporation fund	10	10	16	1,634
Other Federal funds	343	–61	377	5,882
Other trust funds	745	672	–1,181	4,079
Unrealized discount[1]	146	....	....	–1,892
Total, investment in Treasury debt[1]	**–32,935**	**253,121**	**131,706**	**5,121,678**
Investment in agency debt:				
Railroad Retirement Board:				
National Railroad Retirement Investment Trust	1	....	....	5
Total, investment in agency debt[1]	**1**	**.........**	**.........**	**5**
Total, investment in Federal debt[1]	**–32,934**	**253,121**	**131,706**	**5,121,683**
Memorandum:				
Investment by Federal funds (on-budget)	8,839	38,732	42,341	481,643
Investment by Federal funds (off-budget)	269	*	....	2,860
Investment by trust funds (on-budget)	–79,537	197,608	91,476	1,868,013
Investment by trust funds (off-budget)	37,348	16,781	–2,111	2,771,060
Unrealized discount[1]	146	....	....	–1,892

* $500 thousand or less.

[1] Debt held by Government accounts is measured at face value except for the Treasury zero-coupon bonds held by the Nuclear waste disposal fund and the Pension Benefit Guaranty Corporation (PBGC), which are recorded at market or redemption price; and the unrealized discount on Government account series, which is not distributed by account. Changes are not estimated in the unrealized discount. If recorded at face value, at the end of 2013 the debt figures would be $20.2 billion higher for the Nuclear waste disposal fund and $0.2 billion higher for PBGC than recorded in this table.

[2] Off-budget Federal entity.

[3] Amounts on calendar-year basis.

the Second Liberty Bond Act of 1917, however, the nature of the limitation was modified in several steps until it developed into a ceiling on the total amount of most Federal debt outstanding. This last type of limitation has been in effect since 1941. The limit currently applies to most debt issued by the Treasury since September 1917, whether held by the public or by Government accounts; and other debt issued by Federal agencies that, according to explicit statute, is guaranteed as to principal and interest by the U.S. Government.

The third part of Table 4–2 compares total Treasury debt with the amount of Federal debt that is subject to the limit. Nearly all Treasury debt is subject to the debt limit.

A large portion of the Treasury debt not subject to the general statutory limit was issued by the Federal Financing Bank. The FFB is authorized to have outstanding up to $15 billion of publicly issued debt. It issued $14 billion of securities to the CSRDF on November 15, 2004, in exchange for an equal amount of regular Treasury securities. The securities mature on dates from June 30, 2009, through June 30, 2019. At the end of 2013, $6 billion of these securities remained outstanding. On October 1, 2013, FFB issued $9 billion of securities to the CSRDF, in exchange for an equal amount of special-issue Treasury securities issued by the Treasury and held by the CSRDF. The securities issued in October 2013 mature on dates from June 30, 2015, through June 30, 2024. The FFB securities have the same interest rates and maturities as the Treasury securities for which they were exchanged.

The Housing and Economic Recovery Act of 2008 created another type of debt not subject to limit. This debt, termed “Hope Bonds,” has been issued by Treasury to the FFB for the HOPE for Homeowners program. The outstanding balance of Hope Bonds was $494 million at the end of 2013 and is projected to fall to $32 million at the end of 2014 and then to increase gradually in subsequent years.

The other Treasury debt not subject to the general limit consists almost entirely of silver certificates and other currencies no longer being issued. It was $485 million at the end of 2013 and is projected to gradually decline over time.

The sole agency debt currently subject to the general limit, $209,000 at the end of 2013, is certain debentures issued by the Federal Housing Administration.[17]

Some of the other agency debt, however, is subject to its own statutory limit. For example, the Tennessee Valley Authority is limited to $30 billion of bonds and notes outstanding.

The comparison between Treasury debt and debt subject to limit also includes an adjustment for measurement differences in the treatment of discounts and premiums. As explained earlier in this chapter, debt securities may be sold at a discount or premium, and the measurement of debt may take this into account rather than recording the face value of the securities. However, the measurement differs between gross Federal debt (and its components) and the statutory definition of debt subject to limit. An adjustment is needed to derive debt subject to limit (as defined by law) from Treasury debt. The amount of the adjustment was $14.4 billion at the end of 2013 compared with the total unamortized discount (less premium) of $46.5 billion on all Treasury securities.

Changes in the debt limit.—The statutory debt limit has been changed many times. Since 1960, the Congress has passed 81 separate acts to raise the limit, revise the definition, extend the duration of a temporary increase, or temporarily suspend the limit.[18]

The $16,394 billion debt ceiling that had been established by the Budget Control Act of 2011 was reached on December 31, 2012.

The three subsequent laws addressing the debt limit have each provided for a temporary suspension followed by an increase in an amount equivalent to the debt that was issued during that suspension period in order to fund commitments requiring payment through the specified end date. The No Budget, No Pay Act of 2013 suspended the debt limit from February 4, 2013, through May 18, 2013, and then raised the debt limit on May 19, 2013, by $305 billion, to $16,699 billion. Subsequently, Treasury began to take extraordinary measures to meet the Government’s obligation to pay its bills and invest its trust funds while remaining below the statutory limit. The Continuing Appropriations Act, 2014, suspended the $16,699 billion debt ceiling from October 17, 2013, through February 7, 2014, and then raised the debt limit on February 8, 2014, by $512 billion to $17,212 billion. Again, Treasury began to take extraordinary measures to meet the Government’s obligations. The Temporary Debt Limit Extension Act suspended the $17,212 billion debt ceiling from February 15, 2014, through March 15, 2015.

At many times in the past several decades, including 2013 and 2014, the Government has reached the statutory debt limit before an increase has been enacted. When this has occurred, it has been necessary for the Department of the Treasury to take extraordinary measures to meet the Government’s financial obligations. One such measure is the partial or full suspension of the daily reinvestment of the Thrift Savings Plan G-Fund. The Treasury Secretary has statutory authority to suspend investment of the G-Fund in Treasury securities as needed to prevent the debt from exceeding the debt limit. Treasury determines each day the amount of investments that would allow the fund to be invested as fully as possible without exceeding the debt limit. At the end of December 2013, the TSP G-Fund had an outstanding balance of $173 billion. The Secretary is also authorized to suspend investments in the CSRDF and to declare a debt issuance suspension period, which allows him or her to redeem a limited amount of securities held by the CSRDF. The Postal Accountability and Enhancement Act of 2006 provides that investments in the Postal Service Retiree Health Benefits Fund shall be made in the same manner as investments in the CSRDF.[19] Therefore, Treasury is able to take similar administrative actions with the PSRHBF. The law requires that when any such actions are taken with the G-Fund, the CSRDF, or the PSRHBF, the Secretary is required to make the fund whole after the debt limit has been raised by restoring the forgone interest and investing the fund fully. Another measure for staying below the debt limit is disinvestment of the Exchange Stabilization Fund. The outstanding balance in the Exchange Stabilization Fund was $23 billion at the end of December 2013.

As the debt nears the limit, including in 2013 and 2014, Treasury has also suspended the issuance of SLGS to reduce unanticipated fluctuations in the level of the debt.

In addition to these steps, Treasury has previously exchanged Treasury securities held by the CSRDF with borrowing by the FFB, which, as explained above, is not subject to the debt limit. This measure was most recently taken in November 2004 and October 2013.

The debt limit has always been increased prior to the exhaustion of Treasury’s limited available administrative actions to continue to finance Government operations when the statutory ceiling has been reached. Failure to enact a debt limit increase before these actions were exhausted would have significant and long-term negative consequences. Without an increase, Treasury would be unable to make timely interest payments or redeem maturing securities. Investors would cease to view U.S.

[17] At the end of 2013, there were also $18 million of FHA debentures not subject to limit.

[18] The Acts and the statutory limits since 1940 are listed in *Historical Tables, Budget of the United States Government, Fiscal Year 2015*, Table 7.3.

[19] Both the CSRDF and the PSRHBF are administered by the Office of Personnel Management.

Table 4–6. FEDERAL FUNDS FINANCING AND CHANGE IN DEBT SUBJECT TO STATUTORY LIMIT
(In billions of dollars)

Description	Actual 2013	Estimate 2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Change in Gross Federal Debt:												
Federal funds deficit (+)	765.9	743.7	668.9	621.6	573.9	538.4	556.3	550.0	539.8	526.2	476.8	429.8
Other transactions affecting borrowing from the public -- Federal funds[1]	20.6	271.3	126.6	134.6	130.0	114.7	109.6	109.3	107.9	106.9	110.1	112.1
Increase (+) or decrease (–) in Federal debt held by Federal funds	9.1	38.7	42.3	42.8	47.1	47.2	44.6	47.6	41.7	51.2	53.7	55.9
Adjustments for trust fund surplus/deficit not invested/disinvested in Federal securities[2]	–127.2	119.5	–17.0	–1.0	–1.0	–0.9	–0.8	–0.8	–0.8	–0.9	–0.6	–0.5
Change in unrealized discount on Federal debt held by Government accounts	0.1	....	....	....	....	....	....	....	....	....	....	....
Total financing requirements	668.5	1,173.2	820.8	798.1	750.1	699.3	709.7	706.1	688.6	683.3	639.9	597.3
Change in Debt Subject to Limit:												
Change in gross Federal debt	668.5	1,173.2	820.8	798.1	750.1	699.3	709.7	706.1	688.6	683.3	639.9	597.3
Less: increase (+) or decrease (–) in Federal debt not subject to limit	–0.9	8.3	–0.9	–2.4	–2.5	–2.1	–2.5	–2.6	–2.1	–2.3	–2.9	–2.7
Less: change in adjustment for discount and premium[3]	–3.0	....	....	....	....	....	....	....	....	....	....	....
Total, change in debt subject to limit	672.4	1,164.9	821.8	800.5	752.6	701.5	712.2	708.7	690.7	685.6	642.8	600.0
Memorandum:												
Debt subject to statutory limit[4]	16,699.4	17,864.3	18,686.0	19,486.6	20,239.2	20,940.6	21,652.9	22,361.5	23,052.2	23,737.8	24,380.6	24,980.6

[1] Includes Federal fund transactions that correspond to those presented in Table 4-2, but that are for Federal funds alone with respect to the public and trust funds.
[2] Includes trust fund holdings in other cash assets and changes in the investments of the National Railroad Retirement Investment Trust in non-Federal securities.
[3] Consists of unamortized discount (less premium) on public issues of Treasury notes and bonds (other than zero-coupon bonds).
[4] Legislation enacted February 15, 2014, (P.L. 113-83) temporarily suspends the debt limit through March 15, 2015.

Treasury securities as free of credit risk and Treasury's interest costs would increase. Because interest rates throughout the economy are benchmarked to the Treasury rates, interest rates for State and local governments, businesses, and individuals would also rise. Foreign investors would likely shift out of dollar-denominated assets, driving down the value of the dollar and further increasing interest rates on non-Federal, as well as Treasury, debt. In addition, the Federal Government would be forced to delay or discontinue payments on its broad range of obligations, including Social Security and other payments to individuals, Medicaid and other grant payments to States, individual and corporate tax refunds, Federal employee salaries, payments to vendors and contractors, and other obligations.

The debt subject to limit is estimated to increase to $17,864 billion by the end of 2014 and to $18,686 billion by the end of 2015.

Federal funds financing and the change in debt subject to limit.—The change in debt held by the public, as shown in Table 4–2, and the change in debt net of financial assets are determined primarily by the total Government deficit or surplus. The debt subject to limit, however, includes not only debt held by the public but also debt held by Government accounts. The change in debt subject to limit is therefore determined both by the factors that determine the total Government deficit or surplus and by the factors that determine the change in debt held by Government accounts. The effect of debt held by Government accounts on the total debt subject to limit can be seen in the second part of Table 4–2. The change in debt held by Government accounts results in 15 percent of the estimated total increase in debt subject to limit from 2014 through 2024.

The budget is composed of two groups of funds, Federal funds and trust funds. The Federal funds, in the main, are derived from tax receipts and borrowing and are used for the general purposes of the Government. The trust funds, on the other hand, are financed by taxes or other receipts dedicated by law for specified purposes, such as for paying Social Security benefits or making grants to State governments for highway construction.[20]

A Federal funds deficit must generally be financed by borrowing, which can be done either by selling securities to the public or by issuing securities to Government accounts that are not within the Federal funds group. Federal funds borrowing consists almost entirely of Treasury securities that are subject to the statutory debt limit. Very little debt subject to statutory limit has been issued for reasons except to finance the Federal funds deficit. The change in debt subject to limit is therefore determined primarily by the Federal funds deficit, which is equal to the difference between the total Government deficit or surplus and the trust fund surplus. Trust fund surpluses are almost entirely invested in securities subject to the debt limit, and trust funds hold most of the debt held by Government accounts. The trust fund surplus reduces the total budget deficit or increases the total budget surplus, decreasing the need to borrow from the public or increasing the ability to repay borrowing from the public. When

[20] For further discussion of the trust funds and Federal funds groups, see Chapter 26, "Trust Funds and Federal Funds."

Table 4–7. FOREIGN HOLDINGS OF FEDERAL DEBT
(Dollar amounts in billions)

Fiscal Year	Debt held by the public			Change in debt held by the public[2]	
	Total	Foreign[1]	Percentage foreign	Total	Foreign
1965	260.8	12.3	4.7	3.9	0.3
1970	283.2	14.0	5.0	5.1	3.8
1975	394.7	66.0	16.7	51.0	9.2
1980	711.9	121.7	17.1	71.6	1.4
1985	1,507.3	222.9	14.8	200.3	47.3
1990	2,411.6	463.8	19.2	220.8	72.0
1995	3,604.4	820.4	22.8	171.3	138.4
2000	3,409.8	1,038.8	30.5	–222.6	–242.6
2005	4,592.2	1,929.6	42.0	296.7	135.1
2006	4,829.0	2,025.3	41.9	236.8	95.7
2007	5,035.1	2,235.3	44.4	206.2	210.0
2008	5,803.1	2,802.4	48.3	767.9	567.1
2009	7,544.7	3,570.6	47.3	1,741.7	768.2
2010	9,018.9	4,324.2	47.9	1,474.2	753.6
2011	10,128.2	4,912.1	48.5	1,109.3	587.9
2012	11,281.1	5,476.0	48.5	1,152.9	563.9
2013	11,982.6	5,652.9	47.2	701.4	176.9

[1] Estimated by Treasury Department. These estimates exclude agency debt, the holdings of which are believed to be small. The data on foreign holdings are recorded by methods that are not fully comparable with the data on debt held by the public. Projections of foreign holdings are not available. The estimates include the effects of benchmark revisions in 1984, 1989, 1994, and 2000, annual June benchmark revisions for 2002-2010, and additional revisions.

[2] Change in debt held by the public is defined as equal to the change in debt held by the public from the beginning of the year to the end of the year.

the trust fund surplus is invested in Federal securities, the debt held by Government accounts increases, offsetting the decrease in debt held by the public by an equal amount. Thus, there is no net effect on gross Federal debt.

Table 4–6 derives the change in debt subject to limit. In 2013 the Federal funds deficit was $766 billion, and other factors increased financing requirements by $21 billion. The change in the Treasury operating cash balance increased financing requirements by $3 billion and the net financing disbursements of credit financing accounts increased financing requirements by $132 billion, largely offset by other factors, which decreased financing requirements by $114 billion. As discussed earlier in this chapter, this net $114 billion in other factors was mainly due to the suspension of investment of the TSP G-Fund, undertaken as an extraordinary measure to continue Federal Government operations while at the debt ceiling. In addition, special funds and revolving funds, which are part of the Federal funds group, invested a net of $9 billion in Treasury securities. A $127 billion adjustment is also made for the difference between the trust fund surplus or deficit and the trust funds' investment or disinvestment in Federal securities (including the changes in NRRIT's investments in non-Federal securities). As discussed above, this unusually large adjustment amount is due primarily to the extraordinary measures taken with the CSRDF. As a net result of all these factors, $669 billion in financing was required, increasing gross Federal debt by that amount. Since Federal debt not subject to limit decreased by $1 billion and the adjustment for discount and premium changed by $3 billion, the debt subject to limit increased by $672 billion, while debt held by the public increased by $701 billion.

Debt subject to limit is estimated to increase by $1,165 billion in 2014 and by $822 billion in 2015. The projected increases in the debt subject to limit are caused by the continued Federal funds deficit, supplemented by the other factors shown in Table 4–6. While debt held by the public increases by $7,003 billion from the end of 2013 through 2024, debt subject to limit increases by $8,281 billion.

Foreign Holdings of Federal Debt

During most of American history, the Federal debt was held almost entirely by individuals and institutions within the United States. In the late 1960s, foreign holdings were just over $10 billion, less than 5 percent of the total Federal debt held by the public. Foreign holdings began to grow significantly starting in 1970 and now represent almost half of outstanding debt. This increase has been almost entirely due to decisions by foreign central banks, corporations, and individuals, rather than the direct marketing of these securities to foreign residents.

Foreign holdings of Federal debt are presented in Table 4–7. At the end of 2013, foreign holdings of Treasury debt were $5,653 billion, which was 47 percent of the total debt held by the public.[21] Foreign central banks and foreign official institutions owned 71 percent of the foreign holdings of Federal debt; private investors owned nearly all the rest. At the end of 2013, the nations holding the largest shares of U.S. Federal debt were China, which held 23 percent of all foreign holdings, and Japan, which held 21 percent. All of the foreign holdings of Federal debt are denominated in dollars.

Although the amount of foreign holdings of Federal debt has grown greatly over this period, the proportion that foreign entities and individuals own, after increasing abruptly in the very early 1970s, remained about 15–20 percent until the mid-1990s. During 1995–97, however, growth in foreign holdings accelerated, reaching 33 percent by the end of 1997. Foreign holdings of Federal debt resumed growth in the following decade, increasing from 34 percent at the end of 2002 to 42 percent at the end of 2004 and to 48 percent at the end of 2008. Since 2008, foreign holdings have remained relatively stable as a percentage of Federal debt. Foreign holdings fell from 49 percent at the end of 2012 to 47 percent at the end of 2013. The increase in foreign holdings was about 25 percent of total Federal borrowing from the public in 2013 and 46 percent over the last five years.

Foreign holdings of Federal debt are around 25 percent of the foreign-owned assets in the United States, depending on the method of measuring total assets. The foreign purchases of Federal debt securities do not measure the full impact of the capital inflow from abroad on the market for Federal debt securities. The capital inflow supplies additional funds to the credit market generally, and thus affects the market for Federal debt. For example, the capital inflow includes deposits in U.S. financial intermediaries that themselves buy Federal debt.

Federal, Federally Guaranteed, and Other Federally Assisted Borrowing

The Government's effects on the credit markets arise not only from its own borrowing but also from the direct loans that it makes to the public and the provision of assistance to certain borrowing by the public. The Government guarantees various types of borrowing by individuals, businesses, and other non-Federal entities, thereby providing assistance to private credit markets. The Government is also assisting borrowing by States through the Build America Bonds program, which subsidizes the interest that States pay on such borrowing. In addition, the Government has established private corporations—Government-Sponsored Enterprises—to provide financial intermediation for specified public purposes; it exempts the interest on most State and local government debt from income tax; it permits mortgage interest to be deducted in calculating taxable income; and it insures the deposits of banks and thrift institutions, which themselves make loans.

Federal credit programs and other forms of assistance are discussed in Chapter 20, "Credit and Insurance," in this volume. Detailed data are presented in tables accompanying that chapter.

[21] The debt calculated by the Bureau of Economic Analysis is different, though similar in size, because of a different method of valuing securities.